A CASE STUDY OF TEACHERS’ PERCEPTIONS OF INSTRUCTION AND SELF-EFFICACY AS IMPACTED BY RACE TO THE TOP POLICY

A thesis presented
by

Jennifer Anne Chirles

to

The School of Education

In partial fulfillment of the requirements for the degree of Doctor of Education

in the field of

Education

College of Professional Studies
Northeastern University
Boston, Massachusetts
March 2018
Abstract

This qualitative case study examined teachers’ perceptions of their instruction and self-efficacy during the implementation of Race to the Top initiatives. The site for the case study was a highly effective public school district in Southwest Connecticut. Participants included four middle school teachers who have taught in Grades 6 through Grade 8 since the 2012-2013 school year. Student achievement data, professional development documents, self-efficacy survey data, and focus group data were collected and analyzed. This case study looked at one district’s approach to implementing policy to better understand the perspectives of teachers experiencing policy change to answer two research questions: 1) How do teachers perceive their instructional practices been impacted since the implementation of RTTT curriculum and assessment initiatives? 2) How do teachers perceive their instructional self-efficacy since the implementation of RTTT initiatives? Through the examination of teacher perceptions of the influence of policy on their instructional practices, this study assists change agents implementing future policies. Findings of the study are: 1) Teachers were provided with resources that enabled them to implement instructional changes. 2) Teachers’ instructional practices were influenced by the Smarter Balanced accountability. 3) Teachers’ self-efficacy has been impacted in preparing for the Smarter Balanced Assessment. 4) Regardless of level of self-efficacy, teachers feel an increase in stress. 5) Strong teacher self-efficacy supported a shift in instructional practices to develop student learning habits.

Key words: Race to the Top, educational policy, case study, Smarter Balanced, Common Core, self-efficacy, educational change
Acknowledgements

This doctoral thesis would not have been possible if not for the support of many individuals who were my constant during this process. I am sincerely thankful to Dr. Margaret Dougherty, my Northeastern University dissertation chair, for her patience and continual support. Thank you to Dr. Chris Unger and Dr. Felicia Bellows for their guidance. Thank you to the wonderful cadre of learners in the Northeastern University CPS community. Special thank you to my husband, Michael and to my chapter 1.5, Cameron, who was a welcome member at the start of this dissertation process. To my parents, Florence and Richard, and my family thank you for your unending support and love. Thank you to my colleagues who have been extremely supportive and giving of their time, their expertise, and their support. Having cheerleaders like all of you on the sidelines helped me to finish this journey. The dissertation process is not only about what are studying, but a study in one’s self, one’s ability to persevere despite setbacks and hurdles, and to keep moving forward.
Table of Contents

Chapter 1: Introduction ........................................................................................................ 6
    Research Problem ........................................................................................................ 6
    Justification for the Research Problem ........................................................................ 8
    Deficiencies in the Evidence ........................................................................................ 9
    Relating Discussion to Audience .................................................................................. 10
    Significance of the Problem ......................................................................................... 11
    Positionality Statement ............................................................................................... 13
    Research Questions ..................................................................................................... 14
    Theoretical Framework ............................................................................................... 15
        Self-efficacy theory ................................................................................................ 15
        Educational change theory ...................................................................................... 18
    Summary ..................................................................................................................... 22

Chapter 2: Literature Review ............................................................................................ 23
    Standards-based Reform: Past and Present ................................................................. 23
        The challenges of No Child Left Behind ................................................................ 30
    Race to the Top Fund .................................................................................................. 32
    Every Student Succeeds Act ....................................................................................... 37
    Connecticut Reform Policies ...................................................................................... 37
    Teacher Self-Efficacy and Educational Change ......................................................... 41
        Social-Emotional Effects of Educational Change .................................................... 45
    Educational Policy Implementation ............................................................................ 49
    Conclusion ................................................................................................................ 51

Chapter 3: Research Design ............................................................................................. 54
    Methodology ............................................................................................................... 55
    Research Design: Qualitative .................................................................................... 57
    Research Tradition: Case Study Approach .............................................................. 57
    Participants ............................................................................................................... 60
        Sample size ........................................................................................................... 63
        Limitations on sample size .................................................................................. 64
    Recruitment and Access ............................................................................................ 64
    Data Collection .......................................................................................................... 65
        Standards-based test data ..................................................................................... 66
        Professional development documentation review ................................................. 67
    Survey ....................................................................................................................... 67
    Focus group .............................................................................................................. 68
    Data Storage .............................................................................................................. 72
    Data Analysis ............................................................................................................ 73
    Coding ....................................................................................................................... 75
    Limitations ............................................................................................................... 88
    Trustworthiness ........................................................................................................ 89
    Conclusion ................................................................................................................ 91

Chapter 4: Report of Research Findings ........................................................................... 93
    Student Achievement Data ......................................................................................... 93
    Professional Development Document Review .......................................................... 103
PD document review data................................................................. 103
Develop internal capacity............................................................. 110
Professional development supported teacher self-efficacy............... 111
Self-efficacy Survey........................................................................ 115
Participants...................................................................................... 115
Self-efficacy survey data............................................................... 116

Focus Group Interview................................................................... 126
Protocols ......................................................................................... 126
Summary of thematic reduction of codes ....................................... 133

Summary of Research Findings...................................................... 151
Data Triangulation.......................................................................... 151
Findings......................................................................................... 153
Conclusion ..................................................................................... 158

Chapter 5: Discussion of Findings................................................ 160
Findings.......................................................................................... 161
Finding 1: Teachers were provided with resources that enabled them to implement instructional changes.............................................. 161
Finding 2: Teachers’ instructional practices were influenced by the Smarter Balanced accountability.................................................... 164
Finding 3: Teachers’ self-efficacy has been impacted in preparing for the Smarter Balanced Assessment.............................................. 167
Finding 4: Regardless of level of self-efficacy, teachers feel an increase in stress ................................................................. 169
Finding 5: Strong teacher self-efficacy supported a shift in instructional practices to develop student learning habits........................................... 171

Implications of Findings................................................................. 173
Implications of findings on the theoretical framework.................... 173
Implications of findings for the literature........................................ 176
Implications of findings for research............................................... 178
Implications of findings for practice............................................... 179
Conclusion ..................................................................................... 181

References...................................................................................... 183

Appendices.................................................................................... 192
Appendix A: Access Letter to Superintendent................................ 192
Appendix B: Access Letter to Building Principals......................... 193
Appendix C: Screening Tool ............................................................ 194
Appendix D: Signed Informed Consent Document........................ 195
Appendix E: Signed Informed Consent for Participation Form.......... 196

Appendix F: Teachers’ Sense of Efficacy Scale (long form) (Tschannen-Moran, Woolfolk-Hoy, 2001) .................................................. 199
Appendix G: Permission Letters to use the Teachers’ Sense of Efficacy Scale ................................................................. 201
Appendix H: Focus Group Interview Protocol................................ 203
Appendix I: Index of Themes, Codes, and Abbreviations................. 204
Chapter 1: Introduction

Teachers constantly deal with change. Each year educators receive new students. Perhaps they change classrooms or schools. Some have new courses to teach, a new administrator, or new state mandates. Recently, teachers faced a sea of policy changes including changes to state standards, state assessments, and evaluations. The continuous systemic rollout of policy at the federal and state level had rippling effects on districts, schools, teachers, and their students. Educational change through new standards, new evaluation criteria, new standards-based assessments, and new school accountability systems increases a focus on accountability that may create pressures on teachers (von der Embse, Pendergast, Segool, Saeki, & Ryan, 2016). Experiencing change can affect the social-emotional well-being of teachers, leading to burnout and attrition (Schwarzer & Hallum, 2008). Effective educational change considers teacher self-efficacy during implementation, providing resources and support (Fullan, 2007). This case study looked at one district’s approach to implementing policy to better understand the perspectives of teachers experiencing policy change.

Research Problem

Teachers under increased stress experience discouragement, burn out, and attrition. Effective educational change (Fullan, 2007) includes the development of teacher self-efficacy, such as providing sufficient resources and support and including staff in the change process. Self-efficacy, as theorized by Bandura (1993), is the belief in his or her “capabilities to exercise control over their own level of functioning and over events that affect their lives” (p. 188). Efficacy can influence cognitive development and functioning, with low self-efficacy resulting in lower performance and motivation (Bandura, 1993a). This is especially true when people
perceive a lack of control in their environment. A perceived lack of control can result in losing faith in ones’ capabilities, lowering aspirations, and deteriorating performances (Bandura, 1993a, p. 125). In this case study, the researcher examined secondary teachers’ perceptions of their instructional practices and their self-efficacy since the implementation of the Race to the Top initiatives.

Teachers have experienced a multitude of policy changes in the past few years. In 2009, Race to the Top (RTTT) was enacted. The federal government allocated over $4 billion to states whose applicants were willing to implement education reforms. Applicants who desired a portion of these funds needed to show a willingness to adopt new standards and assessments. The new standards and related assessments would be created with a goal of preparing students for future college and career readiness in a global economy. Additionally, state agencies would build data systems in order to measure student growth and provide educators with needed information to improve instruction (“Race to the Top Fund,” 2014, p. 2). This grant prompted reforms in content standards, standards-based assessments, and teacher evaluations, affecting the daily lives of teachers.

One of the most prominent initiatives to come out of Race to the Top is the adoption of common standards. In the United States, over 40 states had adopted the Common Core State Standards (CCSS), with the goal of providing all 21st-century learners a relevant, high quality education in English Language Arts and Mathematics (National Governors Association Center for Best Practices, Council of Chief State School Officers, 2010b). Additionally, the Race to the Top grant had an increased emphasis on accountability through standards-based assessments and teacher evaluations. To measure student achievement, states had the options of administering standards-based assessments designed by the state or designed by one of two RTTT federally
funded testing consortia, Partnership for Assessment of Readiness of College and Careers (PARCC) or Smarter Balanced. Results from the selected standards-based summative performance assessments may be used in end-of-year teacher evaluations to evaluate teacher performance and to measure school progress.

Although policy changes have taken place for years, research of past experiences has shown the implementation of the changes to be mixed. Policy change does not guarantee an instructional shift towards an increase in student learning. To be most effective, educational policy changes should be implemented using best practices. This includes best practices within educational change theory (Fullan, 2007) and the consideration of teacher self-efficacy (Bandura, 1993). This study serves to better understand the perceptions of teachers experiencing educational policy changes with the hope to inform change agents implementing policies.

**Justification for the Research Problem**

The influence of the policy changes from Race to the Top (2009) should be closely monitored and examined for effectiveness of implementation. Valli and Buese (2007) warn that if changes to curriculum and the monitoring of student achievement “make multiple and simultaneous demands on teachers, especially in a short period of time, the consequences may be quite different from the desired outcomes” (p. 553). The integrated implementation of content and practice standards with aligned assessments and evaluations provides an opportunity to witness educational change as it happens. By examining the beliefs of teachers as they experience the reform initiatives, a greater understanding of the relationship between implementation and instruction can be developed.

There have been research priorities suggested by researchers and organizations to examine the implications of the CCSS, and its resulting accountability practices. In a publication
by the National Council of Teachers of English (NCTE), the emphasis on reading and writing across the curriculum needs to be a priority research agenda. The authors suggested future researcher focus on instructional strategies, but also on the professional development support that develops teacher pedagogical content knowledge (Gere, 2011). Heck, Weiss, and Pasley (2011) suggested a set of priorities for researchers in the education field to understand the influence of the Common Core State Standards for Mathematics (CCSS-M). Heck et al. (2011), suggest examining which aspects of the standards validate current instructional practices, and to identify areas where change is needed. Additionally, the authors propose examining whether “teachers view these changes as positive, negative, or just another round of ‘fleeting reforms’” (Heck, Weiss, & Pasley, 2011, p. 14). Researchers also suggest more research needs to be done on “teachers’ perception of the value and feasibility of reform efforts” (Valli and Buese, 2007, p. 554). In 2014, the Center on Educational Policy presented a research agenda specifying that research related to the implementation of the CCSS is needed (Rentner & Ferguson, 2014). Specifically needed are case studies of districts that are successfully implementing the CCSS. Research is needed on the intersection of standards and assessments, the administration of consortia-developed assessments aligned to the CCSS, and evaluation on implementation (Rentner & Ferguson, 2014).

Deficiencies in the Evidence

Prior research has focused on state-level policy implementation (Cohen & Ball, 1990) and federal policy such as No Child Left Behind (Valli & Buese, 2007). Due to its recent implementation, there is a lack of research on the implementation of CCSS, its related assessments, and teacher evaluations.
In their four-year study of governmental policy on teacher roles, Valli and Buese (2007) found teacher’s pedagogy, professional well-being, and relations with students have deteriorated. They suggest researchers examine whether the deterioration was due to the pace of the changes or the types of changes implemented. Valli and Buese (2007) recommend future research on the relationship among external policy, workplace culture, and teacher roles. Desimone (2013) identified deficiencies in evidence as to how teachers react to new standards-based reform. Saeki, Pendergast, Segool, & Embse (2015) suggest new CCSS-aligned standards, assessments, and evaluations may have “unintended negative consequences on teacher well-being, instructional practices, and student learning outcomes” (p.96). They suggest future research should focus on the accountability practices and the relationships to instructional practice.

Relating Discussion to Audience

The intended audience is district and school-based personnel charged with implementing state and national policies. The increased accountability teachers experience may impact their social-emotional wellbeing, their self-efficacy, and influence in the classroom. After the first year of teaching almost three out of ten new teachers transfer schools or leave the profession (T. M. Smith & Ingersoll, 2004, p. 706). It has been documented that 48% of new teachers leave the profession in the first five years (Watlington, Shockley, Guglielmino, & Felsher, 2010). There are many reasons teachers may leave the profession, however with the knowledge that teachers are under increased stress, it would be in the best interests of policy makers and change agents to find ways to retain quality instructors. Fullan (2001) advises change agents to consider effective implementation if lasting change is the goal. Examination of teacher perceptions of the influence of policy on their instructional practices, this study assists change agents implementing future policies.
Significance of the Problem

Educators are teaching in a field that has seen increased debate over the latest accountability measures. Teachers struggle with balancing the educational value of assessments with the societal, state, school, and community pressures (Remesal, 2011). The support for the CCSS has declined over time, with 65% of the general public supporting the CCSS in 2013 decreasing to 53% in 2014 (Henderson, Peterson, & West, 2015, p. 9). Teachers have also shown decreased support of the Common Core State Standards. Teacher support declined from 76% in 2013 to 46% in 2014 (Henderson et al., 2015, p. 10). The opponents of the CCSS lament the implementation process, the lack of support and materials given to teachers, the connections to corporations, and the linking of assessment to evaluations across the United States (Delevingne, 2015; Freedberg & Harrington, 2015; Megan, 2016).

In 2015, opposition to standards-based testing grew, creating an “opt-out” movement where parents and educators advocated for students to opt out of participating in the standards-based, Common Core-aligned assessments (Bidwell, 2015). Across the United States, school districts report students opting out of the newly administered assessments (Westmaas, 2015). Those opposed to the new mandates decry the length and difficulty of the new assessments, the use of assessment data for evaluative purposes (“Connecticut Education Association officials criticize ‘invalid’ SBAC test - New Haven Register,” 2016), and oppose the Common Core State Standards and its relation to corporate interests (Schneider, 2015). Parents and educators are concerned about the increased emphasis on assessment for evaluative purposes (Burris, 2015).

According to a report by the National Council on Teacher Quality, 41 out of 50 states included standardized and non-standardized measures of student performance in teacher
evaluations, and 28 states are requiring annual evaluations of all teachers (Doherty & Jacobs, 2013). Teachers who receive poor evaluations may experience negative emotions affecting instruction (M. L. Smith, 1991). According to Doherty and Jacobs (2013), some states have connected evaluations of teacher effectiveness to the following policies: tenure decisions, financial bonuses, potential dismissal and layoff decisions, licensure advancement, and reciprocity. Any of these may affect the social and emotional well-being of teachers, and in turn, this could affect their efficacy and instructional practices.

District and school-based personnel must navigate teachers’ personal and professional needs while implementing policy-mandated change. Teachers’ effectiveness is largely shaped by the context in which they are teaching (Kraft & Papay, 2015). During times of reform, teachers have reported believing their professionalism was being eroded (Goodson, Moore, & Hargreaves, 2006a; Lasky, 2005). Teachers’ acceptance of change could be affected by their perceived threats to their expertise, especially if they have low self-efficacy (Zimmerman, 2006). District and school personnel are beholden to the systemic structures that the state and federal governments have put into place. Through all the changes and pressure, school administrators must acknowledge that effective educational reforms include recognition of teachers as professionals (Sheldon & Biddle, 1998). The state and local officials who are implementing new policies have to address these changes across a wide range of districts and must do so effectively.

Increased research on teacher self-efficacy during reform can shine light on the complex relationships standards-based accountability policies have on teaching and learning. Through examining the perspectives of the educators experiencing a multitude of reforms, the researcher hoped to gain an understanding of the change process. This understanding may provide change agents information that will help them to implement reforms successfully.
Positionality Statement

As an educator who has worked in various roles as a teacher, curriculum coordinator, and administrator, the author of this research study has seen a need to provide students with an engaging learning environment. In her professional experience, the author has developed a cadre of skills, both technological and pedagogical, in order to shift instruction to address student needs. During the beginning of her career, the author worked with a mentor who fostered teaching using inquiry, hands-on activities, and questioning techniques that guide student learning. Through the guidance of a mentor, the author developed an interest in and passion for student-centered, inquiry-based lessons that assist students in their growth of knowledge.

The author of this study worked with teachers to align current curriculum and practice with the Common Core State Standards, supporting teachers in the preparation and administration of standards-based assessments, supporting teachers in their professional learning, and designing effective professional development. As an educator enrolled in a doctoral program, the author was immersed in literature regarding best practices for teaching and learning, and the benefits of student-centered learning (Boaler, 1998; Brush & Saye, 2000; Cornelius-White, 2007; Hiebert et al., 1996). By engaging in academic reviews of best practices and work experiences in the classroom, building, and district levels, the researcher has developed a philosophy of teaching and learning.

One must recognize others have different experiences, education, and stages of professional growth. Fennell and Arnot (2008) warn against characterizing individuals in “de-universalizing categories” (p. 528). Many stereotypes of teachers exist in education: the experienced teachers who are reluctant to change, the union president who questions the motives of the administration, and the novice teacher who is eager to try new things. Instead of placing
teachers into stereotypes, it is important for the researcher to remain objective, to examine each teacher as an individual, and identify commonalities amongst all participants. As a former classroom teacher, the author of this study relates to teachers who feel pressure to cover curriculum while trying to develop student understanding. The author felt pressure to increase student results on state-mandated assessments, fearful of how student data is reflected in her evaluations, and was also trying to implement instructional best practices to focus on student learning. Although the author may empathize with participants, one must avoid projecting one’s own experiences, thoughts, and feelings, onto the participants.

As a current school administrator, it is important for the author to reflect on her positionality. Being open and listening to the participants and trying to see the world through their lens helped the author maintain her objectivity. She must also refrain from making decisions about the validity of any enacted policies. The purpose of this study is not to judge the policy initiatives but rather to listen and understand teachers’ perceptions during the implementation of the changes.

**Research Questions**

The following two research questions guided this study:

1. How do teachers perceive their instructional practices been impacted since the implementation of RTTT curriculum and assessment initiatives?

2. How do teachers perceive their instructional self-efficacy since the implementation of RTTT initiatives?

The research questions provided insight into the teacher’s perceptions of the effectiveness of his or her own instructional practice when implementing RTTT policy changes, grounded by educational change theory (Fullan, 2007). The questions also provided insight into the teacher’s
perceptions of his or her self-efficacy, which may influence instructional decisions and implementation of the changes grounded in self-efficacy theory (Bandura, 1997). The first question specifically allowed the researcher to consider how the policy changes are being perceived as impacting instructional practice. The second question allowed the researcher to examine how a teacher’s self-efficacy can influence his or her ability to implement change.

**Theoretical Framework**

The theoretical framework for this study included the theories of self-efficacy (Bandura, 1997a) and educational change (Fullan, 2007) within the key theoretical perspective of interpretivism (Butin, 2009). The aim of interpretivism is to document the researched perspective accurately (Butin, 2009). In this case study, the author examined the viewpoints of teachers experiencing educational changes since the Race to the Top (2009) initiatives. For lasting change, Fullan (2007) proposes ten key ideas for successful change. In this study, those key ideas within educational change theory (Fullan, 2007) influenced by Bandura’s (1997) self-efficacy theory will be examined. Through the lens of Bandura’s self-efficacy theory (1997) and Fullan’s (2007) educational change theory, this study will help to validate and extend previous research into teacher beliefs and behaviors (Day, Elliot, & Kington, 2005; Goodson et al., 2006a; Tschannen-Moran & Hoy, 2007; Valli & Buese, 2007).

**Self-efficacy theory.** The implementation of educational change is related to the actions of teachers in their classrooms. Each teacher’s actions are related to one’ belief in his or her own capabilities. Self-efficacy is the “belief in one’s capabilities to organize and execute the courses of action required to produce given attainments” (Bandura, 1997a, p. 3). People will engage and have confidence in activities they feel capable of handling, avoiding those activities they see as exceeding their abilities (Bandura, 1977). Theoretically, when faced with obstacles, people with
strong self-efficacy will exert more effort and will persist longer (Bandura, 1977). Efficacy beliefs affect how people think, feel, strive, and behave (Bandura, 1993a, p. 118). Within the theory of self-efficacy (Bandura, 1997), people who believe they have no control in the change process will not try to make changes to affect results. Alternatively, those who feel they can affect even a small change will find ways to gain control, even in environments where little opportunity exists (Bandura, 1993a). Teachers who exhibit greater self-efficacy create environments that are conducive to learning (Bandura, 1993a).

Efficacy affects human functioning through four major psychological processes: cognitive, motivational, affective, and selective. Cognitive processes are affected by self-efficacy beliefs. A person’s conception of one’s own abilities influences personal goals. If a person has strong self-efficacy, he or she sets higher goals and has a stronger commitment to those goals (Bandura, 1993a). Through the cognitive process, scenarios and visualizations shape beliefs and self-efficacy. Bandura (1993) theorizes that those with higher self-efficacy visualize success, and those with lower self-efficacy visualize failure, focusing on what can go wrong. Bandura (1993) states that success does not come solely from having the necessary skills but also having the belief that one can use those skills effectively.

The self-regulation of the motivational processes is influenced by self-efficacy (Bandura, 1993a). People motivate themselves through goal setting based on beliefs of what they can accomplish. Self-efficacy beliefs help to determine what goals one sets for oneself, the amount of effort expended to achieve the goals, and the resilience to failures (Bandura, 1993a). When someone has high self-efficacy and experiences failure, he or she may attribute the failure to lack of effort, believing ability can be developed through effort. However, for a person with low self-efficacy, failure is often attributed to low-ability, with a perception that ability is a fixed attribute
If a goal has been attained, those with higher self-efficacy set higher, more challenging goals for themselves, creating new motivation.

Physiological and emotional experiences can affect self-efficacy. If someone believes in his or her own coping abilities, it will have an effect on his or her levels of stress, depression, and motivation (Bandura, 1993). Bandura (1977) explained stressful situations might elicit emotional arousal, which provides information concerning one’s ability to handle the situation. The efficacy-activated process can regulate anxious feelings and stem avoidant behavior allowing greater ability to function. Negative stress reactions may suggest one is not prepared or is unable to complete the task. Under feelings of tension and agitation, individual performance may suffer, as well as one’s health (Bandura, 1977, 1993a). Vicarious modeling and mastery experiences may reduce anxiety and increase self-efficacy more effectively by showing teachers they can perform successfully (Ford, Van Sickle, Clark, Fazio-Brunson, & Schween, 2015).

The selection process is where one’s efficacy influences the choices in activities and environments selected. When an activity or environment is viewed as exceeding one’s capability, it will be avoided (Bandura, 1993a). However, if one believes he or she can handle the challenge, he or she may opt to participate in the activity (Bandura, 1993a). Therefore, the learning environments created by the teacher are influenced by the skills and self-efficacy beliefs of that teacher (Bandura, 1993a). Teachers with strong instructional efficacy create experiences for their students to master content. The experiences include spending more time on tasks with an academic focus, more support for students with additional help, and praise students for accomplishments (S. Gibson & Dembo, 1984).

Bandura (1997) identifies four sources of self-efficacy. The strongest sources of self-efficacy are mastery and vicarious experiences. Teachers who have mastery experiences have
had opportunities to experience success in their practice. Since mastery experiences develop after implementation, this is often unavailable at the start of reform. Vicarious experiences allow teachers to observe the work of others. A weaker source of self-efficacy is social persuasion, the encouragement of others. Lastly, physiological and effective states, such as emotional arousal, may inhibit self-efficacy.

Self-efficacy theory (Bandura, 1997) indicates teachers with strong beliefs in their own abilities would be better able to implement instructional changes (S. Gibson & Dembo, 1984). Teachers with lower self-efficacy may perceive the educational changes differently than those with higher efficacy; thereby a shift in a teacher’s perception may change his or her own ability to implement changes (Bandura, 1997).

**Educational change theory.** Within the theoretical framework, the lens of educational change theory (Fullan, 2007) provided the researcher a guide that informs the change agent of the necessary elements of and phases of the change process. Educational change theory (Fullan, 2007) focuses on the process of change, what is needed to sustain reform, and the phases in which innovations create change. Fullan’s theory of educational change (2007) addresses the complex nature of large-scale change. Within Fullan’s theory (2007), educational change is a process. Implementing and continuing education reform is difficult, often including planning and coordinating with hundreds or thousands of people. Fullan (2007) states, “educational change is technically simple and socially complex” (p. 84). Educational policy legislation, preparation, and planning are the first stages of the process. Next, sharing policy with teachers, administrators, and parents, thereby engaging them in the process. Fullan (2007) reminds readers that educational change is a “learning experience for the adults involved” (p. 85).
The researcher will closely examine the implementation of the educational changes through the teachers’ perception of the policy’s influence on their instructional practices using the lens of educational change theory (Fullan, 2007). Successful reform includes teachers identifying changes in their instructional practices. Changes in practice are described as multidimensional innovations in the classroom which are observed as changes in: 1) curriculum materials, 2) teaching practices, and 3) beliefs or understandings about the curriculum and learning practices (Fullan, 2007, p. 85). To achieve the educational reform goal, all three aspects are necessary. Changes in curriculum materials may include new resources, materials, and technologies. Teaching practice changes could be new teaching approaches such as teaching strategies or activities. A change in belief may be a shift in pedagogical theory and assumptions about the new policy.

Fullan (2007) proposes key elements for successful change. First, successful educational changes include staff in the change process (Fullan, 2007). By including staff in the change process, the change is “driven by tapping into people’s dignity and respect” (p. 44). To develop a positive culture that supports change, change agents should maintain the teachers’ professionalism and respect teachers’ professional identities.

People with the appropriate skills, commitment, knowledge, and motivation working on the problem comprise another key to successful change (Fullan, 2007, p. 44). Efforts should be made to develop internal capacity; the knowledge, skills, capabilities, management, and leadership of the staff. Fullan (2007) writes, “assume that lack of capacity is the initial problem and then work on it continuously” (p. 44). By developing the internal capacity, change agents acknowledge the teachers as professionals. The implementation of change is a crucial component to the process. Lack of quality teaching and training materials is an indicator that the
implementation phase was neglected. Superficial implementation occurs when new materials are utilized without deeper understanding (Fullan, 2000). Alternatively, successful educational change occurs when quality teaching and training materials are developed and implemented with integrated pressure and support (Fullan, 2000). Capacity building occurs when there are sufficient resources in staffing, time, and materials, and effective professional development. Building internal capacity provides people with necessary professional learning experiences that build their self-efficacy and the belief that improvement is possible.

Third, building internal accountability that links to external accountability is another key idea for successful change (Fullan, 2007, p. 44). Fullan defines internal accountability as “situations where individual responsibility, collective expectations, and accountability data within the school are aligned” (Fullan, 2007, p. 60). Teachers’ assessment literacy contributes to these views of accountability and data analysis. Assessment literacy is the need for teachers to “examine together how well students are doing, relate this to how they are teaching, and then make improvements” (Fullan, 2007, p. 142). Educators who are assessment literate understand what they are assessing, why they are assessing, and how to select the best assessments (Stiggins, 1995). Assessments used “for learning” instead of assessments “of learning” provide students with clear expectations and teachers with evidence to adjust instruction (Popham, 2009, p. 11). Once teachers view data analysis as a way of identifying student needs and improving performance, they will see its value. However, when teachers feel as if they are being watched and not trusted, accountability measures are not useful, since the changes will negatively affect teacher social emotional well-being (Fullan, 2007).

A fourth key to “establish conditions for the evolution of positive pressure” will be an additional focus (Fullan, 2007, p. 44). Excuses are a barrier to change. Fullan (2007) advises
removing excuses. If an excuse is lack of resources, then provide appropriate resources. If capacity and direction is lacking, then develop capacity and provide direction. Reduce distractors, such as poor procedures and bad relationships. These proactive changes shift the teachers’ focus to the change process, instead of focusing on the barriers to change (Fullan, 2007, p. 61). With excuses removed, Fullan (2007) suggests that there is “no legitimate reason left to be unsuccessful” (p.61). In successful change, Fullan (2007) contends that perception changes from the personal to the collective or from “my to our” (p. 62). For example, teachers shift thinking from my students to our students. When this happens, a collective consciousness is created whereby all stakeholders feel a responsibility to the greater organization and are motivated and invested in its success. Fullan describes this motivation as a contagion. As staff members are motivated, staff members receive more support and pressure to create successful change. This pressure is in the form of both knowledge and emotion. When staff members are motivated, they recognize the benefits of collaboration and a shared vision.

The fifth and final key is to use the previous strategies to build public confidence (p. 44). No one person can implement change. Support from the community through public confidence helps to provide resources necessary to continue the improvement.

To implement change, teachers need knowledge, quality materials, a belief in their own abilities, and a deeper understanding of the changes. When teachers feel unprepared, it can have negative effects on their self-efficacy (Bandura, 1997). Dignity and respect are key sources of motivation for educational change (Fullan, 2007). Being cognizant of teachers’ social-emotional wellness and their beliefs in their own abilities to implement change is necessary. Change agents need to support and develop teachers’ self-efficacy to implement change.
Summary

In this case study, teachers’ perceptions of how their practices were impacted by new policy were examined through the lens of educational change theory (Fullan, 2007) and self-efficacy theory (Bandura, 1997). Through evidence of past failures in implementing wide-scale educational reform, Fullan (2007) theorized that change does not result from singular innovation but a complex multi-dimensional process. If the policy mandates are to be successful, schools will be including staff in the change process, thus developing their internal capacity (Fullan, 2007). This will allow teachers to have control in the change process, increasing their efficacy (Bandura, 1997). Teachers should be using assessments to drive instruction, viewing the accountability practices as a means to drive the learning forward (Fullan, 2007). Teachers who have higher self-efficacy will be able to view the accountability practices as a means to use the feedback from assessments to adjust instruction, creating opportunities for students to master content (Bandura, 1993). Ultimately, it is the teacher who implements educational reforms in the classroom. Teachers who perceive positive pressures and support during reforms will have greater success (Fullan, 2007). Using the lenses of self-efficacy and educational change, the researcher intended to develop an understanding of changes in instructional practice by teachers.
Chapter 2: Literature Review

Educators throughout the United States are implementing new state standards, new assessments aligned to those standards, and new evaluation systems aligned with the assessments resulting from potential Race to the Top grant funding. The use of state standards, assessments, and evaluations has been integrated into revisions of the Elementary and Secondary Education Act (1965). The depth and breadth of the implementation of the accountability measures has evolved over time and continue today. Teachers are now in an “Era of Accountability” (Buchanan, 2015, p. 756) where they face public and private scrutiny over test scores. Some educators have taken to ways to improve test scores without enhancing instructional practices.

This literature review includes an examination of the federal policies that have led to the confluence of policy changes currently taking place in U.S. schools. Tracing the historical foundations of accountability policy from the Elementary and Secondary Education Act (ESEA, 1965), No Child Left Behind Act (2001), the Race to the Top Grant (RTTT, 2009), and most recently, the Every Student Succeeds Act (2015) showing the evolution of educational change with increasing emphasis on teacher accountability. Research regarding the effects of accountability policies on schools, students, and teachers are reviewed. The intersection of the teacher self-efficacy and educational change are examined through the focus on the social-emotional effects of educational change and educational policy implementation.

Standards-based Reform: Past and Present

When examining contemporary educational changes, one can look to 1957, when the Soviet Union successfully launched the first artificial satellite, Sputnik, into space. At a time when the United States was amidst a Cold War, this was a blow to the American psyche. Fearful
the country was not producing enough scientists and engineers, the public looked for higher academic standards, specifically in science and mathematics education (Bybee, 2013). In response to this public interest in education, Congress passed the National Defense Education Act (NDEA) in 1958 (United States Senate, 2015). The NDEA provided funding for higher education loans, resulting in an increased enrollment in colleges and universities.

A “space race” was emerging, and in 1961, President Kennedy put out a call to all Americans to send a man to the Moon. For educators, this announcement prompted curricular reform with a focus on preparing future scientists and mathematicians. The educational reform movement provided financial support to curricular reforms, with support from federal agencies, such as the National Science Foundation, and the private philanthropic organizations, such as the Carnegie Foundation (Bybee, 2013). Curricular reform was the first step in a new type of engagement by the federal government in K-12 education.

Educational reform was supported by federal policy when, in 1965, President Johnson, passed the Elementary and Secondary Education Act (ESEA), providing federal education aid targeted to specific needs areas. Included in this legislation was Title I. The purpose of Title I was to ensure all students have access to a high quality education. Some of the ways to ensure this access, as identified by Title I are 1) ensuring high quality assessments, accountability systems, teacher training, curriculum, and instructional materials aligned with state academic standards, 2) closing the achievement gap between high and low-performing children, and 3) holding schools and other agencies accountable (U.S. Department of Education, 2013, p. 14). For all successful educational change, the goal should focus on closing the achievement gap and raising the bar for all students (Fullan, 2007). Title I was intended “to provide financial assistance to local educational agencies serving areas with high concentrations of children from
low-income families to expand and improve their educational programs by various means” (Thomas & Brady, 2005, p. 52). Title II provided funds for library materials and textbooks, and Title III provided funding for supplemental services such as lab materials and vocational classes (Zelizer, 2015). Prior to the passage of ESEA, federal funding did not interfere with states’ rights regarding curricular and instructional decisions (Standerfer, 2006). Through ESEA, the federal government maintains an influence on the K-12 education system through funding to states and schools.

The ESEA has been continually amended since its inception in 1965. Between 1965 and 1980, the ESEA was amended four times, to reduce fiscal abuse and focus its intent on helping educationally disadvantaged students from low-income families (Thomas & Brady, 2005). ESEA included a major change in the late 1980s when Title I was amended to require that states “document and define levels of achievement for their disadvantaged students” (Thomas & Brady, 2005, p. 54). To satisfy the conditions of Title I, schools needed to assess students’ academic progress annually with standardized test scores. This was a major change compared to past amendments. Schools, districts, and states had to document their results of achievement in order to receive Title I funding. Title I funding and its new accountability measures applied to educationally disadvantaged students from low-income families.

To increase the educational achievement of all students, broader reaching changes were made. In the early 1990s, governors of the United States met during a summit held by the Bush Administration, with the goal of establishing “a set of national educational goals and to reallocate educational policy responsibilities among the federal, state, and local governments” (Heise, 1994, p. 347). This summit resulted in the framework for the Goals 2000 legislation, passed in 1994. Goals 2000 had four major parts (a) a primary focus on student achievement
levels, (b) an emphasis on challenging academic standards specifying knowledge and skill levels at which students should demonstrate mastery, (c) the application of academic standards for all students, including those students for whom academic expectations had traditionally been low, and (d) a reliance on student achievement testing as a means to monitor the effects of reforms (Thomas & Brady, 2005, p. 54). This legislation established a board to develop a national system of skill standards. Grants encouraged states education departments to meet national goals through “state improvement plans,” for states departments of education to develop curriculum, content standards, and instructional materials (Heise, 1994, p. 359). This legislation continued to shift control of educational decisions from state and local governments to the federal government with funding for the mandates provided by the state and local boards (Heise, 1994).

After states developed curricular standards and materials with the support of federal funding, monitoring the achievement of all students and holding states accountable for their progress was the next phase. The Improving America’s Schools Act (IASA) of 1994 was the next reauthorization of the ESEA (ASCD, 2012). Where Goals 2000 provided a framework for standards-based state education reform, IASA provided additional support regarding the opportunities for all students to meet state standards (Riley, 1995). IASA required the development of challenging math, and reading or language arts standards for all children. Assessments aligned with the newly created standards needed to be developed and implemented. State assessments based on the standards needed to be administered to all students. Under mandate, the content aligned assessments were to be administered sometime between grades 3 and 5, again between grades 6 and 9 and again between grades 10 and 12 (Education Week, 1994). Therefore, between grades 3 and 12 students were to receive six assessments (three reading or language arts and three mathematics). These assessments, “should include multiple,
up-to-date… measures that assess higher-order thinking skills and understanding and provide …
reports as well as disaggregated results” by various subgroups (e.g. gender, race, disability
status) (Education Week, 1994, p. 1). The inclusion of subgroups into the testing results
increased the focus by both the government and schools on the achievement of students in low-
performing areas. Often these students are the recipients of the Act’s Title I funds. By
disaggregating the results, schools are held accountable for all students, thus maintaining the
accountability practices for the achievement of students qualifying for Title I (U.S. Department

IASA’s conditions were further clarified for states receiving Title I grants. In order to
receive Title I grant funding, states must develop school improvement plans. Included in those
plans were descriptions of school and districts’ adequate yearly progress linked to performance
on assessments (“Summary of the Improving America’s Schools Act,” 1994). A benchmark for
adequate yearly progress established by performance standards was required. The state
determined the amount of adequate yearly progress schools need to show. If schools failed to
make adequate yearly progress, as defined by the state plan, for two consecutive years, actions
may have been taken against a school, such as “withholding funds, alternative governance,
reconstituting the school staff, transferring students, or implementing state opportunity-to-learn
standards or strategies adopted under Goals 2000” (Education Week, 1994, p. 18). States were
held accountable for the Title I funds using assessment to determine student progress.

The emphasis on accountability was extended through more assessments and developed
standards as ESEA was reauthorized again. The No Child Left Behind (NCLB) Act of 2001 was
another reauthorization of ESEA. Through NCLB, funds were appropriated to states to
implement the law. The funding was in addition to the Title I funds for qualifying students. This
action solidified the federal government’s role in educational policy. Expanding on the mathematics and literacy standards requirements from IASA, NCLB required the development of science standards and assessments aligned to those science standards. The Act expanded frequency of assessments from sometime between grades 3 and 5; again between grades 6 and 9; and again between grades 10 and 12 to yearly assessments in both reading/language arts and mathematics in grades 3 through 8, and one high school grade. Students were also required to take a science assessment at least once in elementary school, once in middle school, and once in high school. Therefore, students were assessed seventeen times between grades 3 and 12 (7 reading or Language Arts assessments, 7 mathematics assessments, and 3 science assessments), an increase from the previous requirement of 6 assessments. NCLB also required results of state assessments be communicated to various stakeholders. States and districts were required to provide annual report cards of student achievement data, broken down by subgroup (Editorial Projects in Education Research Center, 2011). The annual report cards needed to be made available to parents and the public, including data on teacher qualifications. The communication of the results provided both political and social accountability, where state and school funding depended on the results, as well as the social pressure from parents and the media to achieve progress.

The Adequate Yearly Progress (AYP) specified in IASA was further clarified. The new requirements included proficiency deadlines, graduation and participation rates, testing requirements, AYP actions, and new teacher qualifications (Shaul & Ganson, 2005). Under NCLB, all students were expected to reach proficiency in reading and mathematics at elementary, middle, and high school by 2013-2014 (Editorial Projects in Education Research Center, 2011). Schools were required to have at least 95% of students at each level participate in
testing with 95% participation from each subgroup (Shaul & Ganson, 2005). This was to assure subgroups of lower performing students are not excluded from testing.

Through NCLB, teachers were now included in the changes to ESEA. Teachers working in content areas in public schools needed to be highly qualified. To be highly qualified, teachers must have 1) a bachelor’s degree, 2) full state certification or licensure, and 3) proof that they possess content knowledge of each subject they teach (United States Department of Education, 2005, p. 2). To prove teachers know the content of what they teach, teachers must have 1) a major in the subject they teach, 2) credits equivalent to a major in the subject, 3) success on a state-developed test, 4) for veteran teachers, a High, Objective, Uniform State Standard of Evaluation (HOUSSE), which may be experience, expertise, and/or professional training, 5) an advanced certification from the state, or 6) a graduate degree (United States Department of Education, 2005, p. 2). The new requirements for schools and teachers have had a multitude of effects on school systems, both positive and negative.

The passage of No Child Left Behind and the American Recovery and Reinvestment Act (2009) instilled systemic accountability in education. According to Darling-Hammond, (2004b) different aspects of accountability were enacted. There was “political accountability” for board members and legislators who need to justify their decisions to maintain their elected positions (p. 1050). Schools are under “legal accountability” to adhere to the passed legislation (p. 1050). Districts and their schools must comply with rules and regulations through “bureaucratic accountability” (p. 1050). Education staff contends with “professional accountability,” wherein they must attain and maintain a certain level of knowledge, meet standards for licensure, and sustain professional standards in their work (p. 1050). Parents, students, and the surrounding community provide “market accountability” where neighborhoods are selected and homes are
purchased based on the perceived level of success of the neighborhood schools (Darling-Hammond, 2004b, p. 1050).

**The challenges of No Child Left Behind.** No Child Left Behind posed a variety of challenges for schools. To examine teachers’ views of the NCLB legislation, Murnane & Papay (2010) developed a study using a combination of national survey data and focus groups with 25 participants. In their study, the researchers were able to combine broad analysis through survey data as well as in-depth interviews of teachers, focused specifically on NCLB and the state of Massachusetts. Massachusetts was selected because this state had developed demanding standards and rigorous examinations linked to the standards. The authors noted the challenge for some schools to make Adequate Yearly Progress (AYP), especially when schools serve high percentages of economically disadvantaged children, English Language learners, or students with disabilities. The authors found teachers are more likely to leave after the introduction of state-based accountability (Murnane & Papay, 2010). The implementation of the NCLB reforms varied among the states. Hamilton, Stecher, Marsh, McCombs, and Robyn (2007) found the enacted practices differed with most aspects of educational policy changes such as performance standards, indicators, methods for calculating AYP, and school and district support (p. 129).

The challenge to make AYP increased due to a perceived lack of funding to meet the accountability measures set by NCLB (Azzam, Perkins-Gough, & Thiers, 2006; Hamilton et al., 2007). Lack of funding may have resulted in a lack of instructional materials, which may restrict school improvement (Hamilton et al., 2007). Dee, Jacob, and Schwartz (2013) examined financial data and surveys following NCLB and found schools did increase their per-pupil expenditures, not through federal support, but through increased state and local revenues. This data supports the contention by state and school district leaders that the increased expenditures
constituted an “unfunded mandate” in order to comply with NCLB provisions (Dee, Jacob, & Schwartz, 2013, p. 263).

NCLB had both positive and negative effects on curriculum. NCLB did increase the pressure for states to develop rigorous content standards and curriculum as well as assessments aligned with the newly developed standards with expectations for teaching and learning which were clearly identified through those measures (Azzam et al., 2006). Curriculum and assessment reform improved teacher alignment and coordination (Desimone, 2013). It is the belief that by providing equitable access to a rich and rigorous curriculum, the gap can be narrowed (Burris & Welner, 2005). Alignment may provide all students with access to a rigorous curriculum with high standards, potentially narrowing the achievement gap.

NCLB includes assessments on ELA and mathematics. In order for schools to remain in good standing and continue to receive funding, schools and districts must make AYP in ELA and mathematics. The emphasis on the two subject areas shifts the instructional focus away from other content, leading to a narrowing of the curriculum (Cawelti, 2006; Dee et al., 2013; Diamond, 2012; Hamilton et al., 2007). Elementary teachers report spending about 75% of their time on the two subjects (Cawelti, 2006). This narrowing occurred in over 71% of school districts (Azzam et al., 2006). English language arts and mathematics became a priority over science and other disciplines (Diamond, 2012). Although the intention was to provide all students with access to a high-quality curriculum, the emphasis on accountability through assessment led many to restrict the curriculum to the essentials needed for success on standards-based assessments.

NCLB focused attention on low-achieving subgroups, with the goal of narrowing the achievement gap. Schools, now having to report on subgroup data, could no longer disregard the
performance of low-performing students, students with special needs, and students with special circumstances. State, district, and school funds were allocated to identify, monitor, and assess students in lower performing groups, with special attention to the various subgroups to assure that all were being monitored in an effort to close the achievement gap (Desimone, 2013). Teachers demonstrated increased attention to “bubble kids,” students who are close to proficiency, more so than in the past (Hamilton et al., 2007, p. 131), and greater attention was given to identifying, monitoring, and developing the skills of low-achieving students (Azzam et al., 2006; Darling-Hammond, 2004a; Desimone, 2013).

In response to the criticisms of NCLB, in December 2015, the U.S. House of Representatives passed the Every Student Succeeded Act (ESSA, 2015), the latest reauthorization of ESEA (Every Student Succeeds Act, 2015). In this Act, provisions were included to decrease the amount of time spent on standardized testing. States will still have to test reading and math annually in grades 3-8 and once in grades 9-12; however, the law provides greater latitude to states for the implementation on how to test. States may use a single annual assessment or multiple interim assessments, allowing states to limit the amount of time spent on assessments. ESSA (2015) also eliminates the AYP and 100% proficiency requirement, allowing states to develop accountability systems and consequences.

**Race to the Top Fund**

School personnel struggle with implementing educational change policy. In the United States, “a fundamental barrier to developing and sustaining successful schools… is the fragmented, complex, multi-layered educational policy system in which they are embedded” (M. S. Smith & O’Day, 1990, p. 237). In “Systemic School Reform,” Smith and O’Day (1990) called for a common curriculum across states and a rethinking of how assessment is used in
education. The authors contend formal and informal policies, along with pressures to provide immediate results, drain the energies of school personnel. Educators must contend with formal policies, mandates, sanctions, initiatives, and guidelines from both federal and state offices, as well as district administrators, school boards, teachers, parents, and special interest committees. When under pressure from policy, short-term educational change projects are often produced to appease the stakeholders, with no lasting structure to support the educational changes. They suggested a reconstruction of assessments to measure the complexities of student thinking and problem solving with curriculum and instruction supporting those skills.

In 2009, President Obama signed into law the American Recovery and Reinvestment Act (ARRA). This Act provided $4.35 billion for the Race to the Top Fund. The Race to the Top Fund (RTTT) was a competitive grant to reward states for implementing core reforms (U.S. Department of Education, 2009). RTTT encourages and rewards State officials who implement plans in four reform areas. States are rewarded and encouraged to adopt standards and assessments that prepare students for future college and workplace success, use data to measure student growth and to inform instruction, recruit, develop and reward effective educators, and turn around low-achieving schools (“Race to the Top Fund,” 2014, p. 2).

Within RTTT, states are provided guidelines of initiatives that state officials may implement, with each initiative assigned point values. For example, states that develop and adopt common standards earn 40 points, assessments earn 10 points, and improving teacher effectiveness based on performance earns 58 points (U.S. Department of Education, 2009, p. 3). State officials used these guidelines to develop their grant applications with the hopes of earning enough points to win the funds available in the first phase of the grant. States that did not receive grant funding in the first phase of the grant would have opportunities to reapply in later
phases. In 2009, 17 of the 50 states received funding from RTTT (U.S. Department of Education, 2009). In attempts to secure grant funding, 43 states and the District of Columbia have adopted the Common Core State Standards (National Governors Association Center for Best Practices, Council of Chief State School Officers, 2010a). According to the US Department of Education (U.S. Department of Education, 2014), 2 consortia (PARCC and Smarter Balanced) were supported by $350 million of RTTT funding to develop standards-based assessments, with 33 states being affiliated with one of the two (Partnership for Assessment of Readiness for College and Careers, 2015; Smarter Balanced Assessment Consortium, 2015). Many states changed laws to evaluate teacher effectiveness (U.S. Department of Education, 2014). Since the RTTT grant was introduced in 2009, most states have initiated educational changes in standards, assessments, and teacher evaluations.

Previously, standards were developed by individual states. Each state had its own learning goals, standards, and levels of proficiency. In their study, “Teachers' views on no child left behind: Support for the principles, concerns about the practices,” Murnane and Papay (2010) compared the various state proficiency levels to the National Assessment of Educational Progress (NAEP) scale equivalence scores. NAEP is a uniform assessment administered annually to representative samples of students in grades 4, 8, and 12 in all states, providing results on subject matter achievement (National Center for Educational Statistics [NCES], 2013). Through comparison, the minimum proficiencies identified by states varied widely both among states and within each state from grade 4 to grade 8. The variation in proficiency measures supports the need for common standards and assessment measures.

To develop a consistent set of learning goals for students across the states, the National Governors Association and the Council Chief State School Officers, in collaboration with the
National Education Association (NEA), the American Federation of Teachers (AFT), the National Council of Teachers of Mathematics (NCTM), and the National Council of Teachers of English (NCTE), among others, developed the “Common Core State Standards” (National Governors Association Center for Best Practices, Council of Chief State School Officers, 2010b). In its joint statement, the National Council of Supervisors of Mathematics (NCSM), the National Council of Teachers of Mathematics (NCTM), and the Association of Mathematics Teacher Educators (AMTE) expressed their support of the Common Core State Standards for Mathematics (CCSS-M) as one component in providing all students with a high-quality mathematics education (National Council of Supervisors of Mathematics, 2010; National Council of Teachers of Mathematics, 2013). In Principles to Actions, representatives of NCTM stated that the “CCSSM provides guidance and direction, and helps focus and clarify common outcomes. It motivates the development of new instructional resources and assessments” (Leinwand, Brahier, Huinker, & Berry, 2014, p. 4). The representatives of NCTE published a statement encouraging its members to “engage in public dialogue and debate regarding implementation policies of Common Core State Standards and other state standards” (National Council of Teachers of English, 2012). To implement the standards, today’s K-12 educators are preparing their curricula to align with the CCSS; the curricular focus is on both content and practice standards, which may require an adjustment to instructional practice. Teachers had to prepare and adjust to new assessments aligned to these standards with the added pressure of knowing that evaluation may incorporate the results of the assessment.

The alignment of standards-based assessments to Common Core State Standards (CCSS) for English Language Arts and Mathematics creates greater coherence among schools, districts, and states, allowing for comparisons and monitoring of student progress through measurable
outcomes. PARCC and Smarter Balanced assessments are designed to measure student progress by assessing student understanding and higher-order thinking skills (Smarter Balanced Assessment Consortium, 2015). In mathematics, the assessments are constructed to measure problem solving and higher-order thinking skills; therefore, teachers can no longer emphasize rote test-taking strategies as the focus of test preparation.

The federal government does not mandate the adoption and implementation of these standards and assessments. However, to be eligible for RTTT funds, standards that prepare student to be ready for college and careers are required. For states that have adopted the CCSS, including Connecticut, the current state standards were replaced with the CCSS (National Governors Association Center for Best Practices, Council of Chief State School Officers, 2010a). The CCSS emphasizes the development of student understanding over the course of the kindergarten to grade 12 learning experience. Curriculum alignment to the Common Core State Standards necessitates a coherent learning progression throughout grade levels (National Governors Association Center for Best Practices, Council of Chief State School Officers, 2010a). For example, the Common Core State Standards for Mathematics (CCSS-M) include shifts in behaviors and beliefs that are essential for implementation. The CCSS-M includes not only content standards but Standards of Mathematical Practice which is a series of eight mathematical practices that rest on important processes and proficiencies for educators to develop in their students (“Standards for Mathematical Practice,” 2014). The Common Core State Standards for English Language Arts (CCSS-ELA) provides standards and guidelines not only for English language arts, but also for literacy across the content areas of history/social studies, science, and technical subjects. There is increased emphasis on reading and writing across the various disciplines, where the responsibility for developing literacy becomes a task for all teachers, not
just those in ELA. The standards included a greater focus on nonfiction materials, allowing for
greater integration into social studies and science areas. The standards highlight the importance
of critical thinking skills such as close reading, reasoning, and evidence collection to assist
students in college and career readiness and beyond.

**Every Student Succeeds Act**

In 2015, the U.S. House of Representatives passed the Every Student Succeeds Act
(ESSA) (Every Student Succeeds Act, 2015). This law addresses some concerns regarding the
No Child Left Behind Act of 2001. ESSA (2015) allows states and local authorities to develop
school improvement systems. Provisions in the act also address reducing the amount of time spent on testing students. Additionally, standards-based tests will not be the sole measure for
determining school quality, allowing for multiple measures of student learning and other indicators (U.S. Office of the Press Secretary, 2015).

**Connecticut Reform Policies**

Changes continue at the state level. States have adopted curricular standards beyond
ELA and Mathematics. In 2015 and 2016, Connecticut adopted the Social Studies Framework
and the Next Generation Science Standards, new K-12 standards in social studies and science, respectively. In the fall of 2015, CT announced that the state adopted the SAT in lieu of the
Smarter Balanced test for Grade 11 students. In 2015, the Connecticut State Department of
Education presented their new accountability system measuring school and district performance

Connecticut has a history of developing educational programs through accountability
measures. In 1982, the Citizen’s Task Force on Quality Education and the Governor’s
Commission on Equity and Excellence in Education looked at teacher accountability, standards, and compensation, making recommendations that led to the Educational Enhancement Act of 1986 (Baron, 1999). Through this legislation, teacher salaries were increased, and standards for teachers were raised through the implementation of a comprehensive induction program. In 2012 and 2015, Connecticut was approved for an ESEA Flexibility request, allowing the state to modify some components of NCLB Act of 2001.

Connecticut implemented the fourth-grade Connecticut Mastery Test (CMT) in 1985, with sixth and eighth grades in 1986. In 1993, grades three, five, and seven assessments were added. School profiles with CMT data were publicly reported to local Boards of Education and the public in 1993. Although not required by the state, various districts chose to link the CMT assessment data to teacher evaluations. The CMT data has been used by districts to inform decisions and for realignment of curriculum and instruction. The public reporting of data had an impact on instruction and achievement, with multiple districts citing the reporting as a motivator for change (Baron, 1999, p. 27). During this time of policy reform and the implementation of the 1986 Education Enhancement Act, Connecticut documented reading achievement gains (Baron, 1999; Darling-Hammond, 2004b).

Connecticut had a significant gap between poor and rich districts on the state assessment, the CMT. The disparity between high and low-performing districts was the subject of two lawsuits in Connecticut: Horton v. Meskill (1977) and Sheff v. O’Neill (1989). Horton v. Meskill found that the state’s current school funding system was unconstitutional (Education Law Center, n.d.). Sheff v. O’Neill concluded that there was extreme segregation in the Hartford Public School system and that students were not receiving equal educational opportunities (Education Law Center, n.d.). After these court cases, the State of Connecticut enacted many
state level policies between 1996 and 1999. The State Board of Education issued new policy guidelines in 1999 for identifying students with learning disabilities. The State Legislature provided grants for school readiness/preschool, early reading, educational accountability, summer school, and the expansion of family resources.

In Connecticut, a new teacher evaluation model was adopted in 2012 (Connecticut State Department of Education, 2014). Connecticut’s System for Educator Evaluation and Development (SEED) was piloted in the 2012-2013 school year and was revised in 2014 (Connecticut State Department of Education, 2013). This model incorporates multiple, standards-based measures of performance. The new model defines four categories of teacher performance: student learning (45%), teacher performance and practice (40%), parent feedback (10%), and school-wide student learning or student feedback (5%) (Connecticut State Department of Education, 2013). The results of Smarter Balanced high-stakes assessments may be used as a factor in teacher evaluations to determine teacher effectiveness. For example, Connecticut has four components for the teacher evaluation plan. One of the components, “Student Growth and Development,” accounts for 45% of the overall teacher’s evaluation score. Within the evaluation plan, teachers are required to create a Student Learning Objective (SLO) and a corresponding Indicator of Academic Growth and Development (IAGD) to measure whether the SLO has been met. One SLO must be from a standardized assessment (such as the Smarter Balanced Assessment). This SLO accounts for 22.5% of the teacher’s total evaluation score (Connecticut State Department of Education, 2014).

According to the SEED handbook, teachers should be observed between three and eight times per year as part of the “Observation of Teacher Performance and Practice.” School performance is included in “Student Growth and Development” and includes locally-determined
measures since the Smarter Balance assessment data is unavailable until after the 2015-2016 school year (Connecticut State Department of Education, 2014). In order to assure timely evaluations, Connecticut identified an evaluation timeline, which includes goal setting, mid-year, and end-of-year conferences with an evaluator. The new evaluation requirements may be more rigorous, meetings more structured, and conferences more frequent than what teachers experienced previously. Teacher evaluation on scores could affect the teacher and his or her position within a school or district.

Initiatives such as the adoption of new standards and frameworks and assessments in ELA, mathematics, science, and social studies attend to the foundations of literacy and numeracy. Connecticut, at the time of this writing, has adopted common standards in ELA and Mathematics (2009), the Next Generation Science Standards (NGSS-CT) (2015), and the Social Studies Framework (2015). Through the use of these standards, local school officials are given direction in developing grade-level and course expectations and as they implement the reform initiatives as described by P.A. 10-11, “An Act Concerning Education Reform in Connecticut” (An Act Concerning Education Reform in Connecticut, 2010; Connecticut State Department of Education, 2010, 2010).

Connecticut, as a member of the Smarter Balanced Consortium, administered the Smarter Balanced test as its measure of student success in grades K-8 and 11 in the spring of 2015. In response to concerns about over-testing students in grade 11, the Connecticut State Board of Education adopted the SAT to replace the Smarter Balanced test for grade 11 students in the spring of 2016.

The Connecticut State Department of Education announced a new school accountability system in March 2016. The new system, Connecticut’s Next Generation Accountability System,
utilizes multiple measures to develop a “comprehensive and holistic” measure of school quality. The new system uses academic achievement from state assessments (Smarter Balanced and SAT) as well as 10 other measures including absenteeism, coursework, AP exams, graduation rates, postsecondary entrance rate, physical fitness, and arts access (Connecticut State Department of Education, 2016).

**Teacher Self-Efficacy and Educational Change**

Teachers who are resilient and receptive to change often have high self-efficacy beliefs. Teacher self-efficacy is defined as a person’s belief “that he or she is capable of dealing with complex tasks” and one’s ability to teach the subject matter (Holzberger, Philipp, & Kunter, 2013, p. 1). Teachers with high self-efficacy feel confident about their ability to instruct, are effective in the classroom, and are receptive to new instructional practices (Guskey, 1988). People who have greater self-efficacy have been found to exert greater effort (Shea & Bidjerano, 2010) and have greater productivity (Phillips & Russell, 1994). When teachers have high self-efficacy, they are thought to work harder, engage in informal professional learning, are more persistent, less stressed, take on more challenging tasks, and recover quickly from setbacks (Bandura, 1993a; Holzberger et al., 2013; Schwarzer & Hallum, 2008). There is a direct, positive correlation between strong teacher self-efficacy, and student achievement and motivation (Day et al., 2005).

Alternatively, teachers with low self-efficacy experience job stress, depression, anxiety, helplessness, and exhibit weak commitment to their work, which often escalates to burnout (Bandura, 1993a; Holzberger et al., 2013; Schwarzer & Hallum, 2008). Teachers who leave the profession exhibit significantly lower levels of efficacy (Tschannen-Moran, Hoy, & Hoy, 1998), lower job satisfaction, and higher rates of exhaustion (Skaalvik & Skaalvik, 2011). Teachers
who are less effective are less receptive to the implementation of instructional changes (Guskey, 1988). When teachers have lower self-efficacy, they are less dedicated to educational change, making reforms unsuccessful (Cerit, 2013a). Low self-efficacy results from a lack of professional development and teacher learning during a policy implementation (Ford et al., 2015). In their study, Day, Elliot, & Kington (2005) identified a lack of stability among teachers’ professional identity during times of change and suggest that change agents focus on sustaining teacher efficacy. To do this, teachers need vicarious experiences through meaningful collaboration and the modeling of best practices to support their professional identities (Ford et al., 2015). Consideration of the varying degrees of self-efficacy should influence the success of educational reforms.

Bandura (1977, 1994, 1997) proposed that efficacy is developed through four main sources, the most effective being performance or mastery experiences, wherein people who achieve successes through a performance exhibit raised efficacy. Failures lower expectations. People who achieve easy successes with little effort and quick results can be easily discouraged by failure, especially if the failures come before strong efficacy can be developed. People who overcome failures experience strengthened motivation and resilience. If a person experiences repeated successes, then a singular failure will not have as great of an impact. A person develops a belief that he or she has the ability to succeed, persevering through hard times and rebounding when failures occur.

People do not need to experience events themselves; vicarious experiences also develop efficacy (Bandura, 1977, 1994, 1997a). Bandura (1977, 1994, 1997) postulates that by observing the successes of one similar to oneself, the observer develops his or her own belief of future success. Observing others engaging in difficult activities without negative results provides an
expectation that a person can also overcome similar adversity. Experiences through modeling of desired instructional practices can be an effective way of building the self-efficacy of teachers. Bruce, Esmonde, Ross, Dookie, & Beatty, (2010) indicated that pedagogical change requires time and ongoing support in the form of authentic and collaborative professional learning opportunities that are supported and classroom embedded. Successful teacher support through professional development, peer observations, and collegial collaboration can provide vicarious experiences through which teachers can strengthen efficacy.

Bandura (1977, 1994, 1997) described a third way of strengthening efficacy through social or verbal persuasion. When people are given positive feedback, encouraging words, or a pep talk from a supervisor or a colleague, their self-efficacy may increase. Social persuasion may contribute to task initiation or the attempt of a new strategy. This type of efficacy development is more limited and may not be as long-lasting as experiential methods. Bandura (1977) cautioned against using verbal persuasion without support to assist in achieving expectations. If one is persuaded to attempt an initiative and fails, the failure may discredit the persuader and may dissuade future attempts.

Efficacy affects the capability one has in controlling affective processes. The efficacy of a person's coping abilities affects how much the stress and depression is experienced in difficult situations. If someone believes he or she can control threats, he or she will experience lesser anxiety. Those who believe they cannot manage threats have heightened anxiety, magnify the severity of the threats, worry about things that rarely happen, and dwell on their own coping skill deficiencies (Bandura, 1993a, p. 132). This negative thinking increases their anxiety and impairs their ability to function successfully (Bandura, 1989).

Perceptions of the new policies shape the changes teachers make to their instructional practice. Policy reforms challenge a teacher’s commitment, a key factor in quality instruction (Day & Leitch, 2001). To maintain the commitment needed for high quality instruction, acknowledging teacher self-efficacy during change implementation should be a concern for all leaders in any organization (Zimmerman, 2006). In a study of elementary mathematics teachers, perceptions of reforms were influenced by the efficacy beliefs of teachers prior to the reform (Charalambous & Philippou, 2010). Teachers who were more confident and had higher efficacy beliefs pre-reform felt confident using the reforms and were less critical of the changes (Charalambous & Philippou, 2010). Those who are willing to implement reforms have higher efficacy in their instructional methods (Cerit, 2013a; Charalambous & Philippou, 2010).

To implement reforms, successfully, change agents should consider teacher self-efficacy and consider the development of efficacy over the course of the reform. Kaniuka’s (2012) case study of elementary school teachers implementing a reading program illustrated this process. Teachers initially had reservations in their ability to teach effectively, doubts about their content knowledge, and anxiety about the new program. Doubt can be a benefit to educational reform, for educational change requires a “disequilibrium in teachers’ thinking” (Wheatley, 2002, p. 9), which can lead to transformative learning (Kitchenham, 2008) Over time, teachers experienced student success, changing their perspective. Mitigating feelings of self-doubt and anxiety through experiential success became motivation for future endeavors (Kaniuka, 2012). Mastery experience, Bandura (1994) theorized, was an important component in the affective process influencing self-efficacy.

There has been a documented negative relationship between what was required by changes and self-efficacy (McCormick & Ayres, 2009; McCormick, Ayres, & Beechey, 2006).
Teachers should be given opportunities to observe models of instruction and time to experience mastery of new curriculum prior to high-stakes assessment implementation (McCormick & Ayres, 2009). Teachers’ prior knowledge and experience should be considered before and during the implementation of reforms.

**Social-Emotional Effects of Educational Change.** Teachers today are feeling the added pressure of accountability, through increased requirements to show evidence of student success. It has been documented teachers are under stress due to high-stakes testing and its related accountability (Fullan, 2007). NCLB (2002) required multiple policy changes implemented in a short period of time, resulting in “teacher discouragement, role ambiguity, and superficial response to administrative goals” (Valli & Buese, 2007, p. 520). Since 2009, the Connecticut Board of Education has adopted new standards in mathematics, English language arts, science, and social studies; a new assessment system; and increased accountability via evaluations and assessment, all of which may increase stress. Teachers who have lower self-efficacy have increased stress due to the academic demands placed on them (Bandura, 1993a). Teachers begin to question themselves, wondering, “whether I am a good teacher” (Valli and Buese, 2009, p. 553). Teachers report negative effects to their well-being due to accountability policies (Berryhill, Linney, & Fromewick, 2009). When looking at educational change the social-emotional effect on teachers must be considered.

Teachers who have lower self-efficacy may have negative reactions to stress exhibited by physical and emotional exhaustion, depersonalization with colleagues and students, increased illness, and feelings of futility, which often lead to burnout or premature retirement (Bandura, 1993a; Berryhill et al., 2009; Schwarzer & Hallum, 2008) or transfers to other districts (Boyd, Lankford, Loeb, & Wyckoff, 2005). Stress can cause an increase in heart rate, increased blood
pressure; and a decline in immune function, depressed mood, exhaustion, poor performance, lower morale, or attitude and personality changes (Bandura, 1994; Cawelti, 2006; Schwarzer & Hallum, 2008). The potentially serious results highlight a need to consider teachers’ social-emotional well-being when implementing policy changes. When teachers have lower instructional efficacy, they spend less time and often avoid academic matters, focusing on relieving emotional distress (Bandura, 1993a). People with higher self-efficacy often have greater social support, helping mediate the effects of stress, anxiety, and depression. Teachers with higher efficacy manage stressors more effectively, exerting effort in resolving problems (Bandura, 1993a). When feelings of discouragement, role ambiguity, and anxiety combine with lower self-efficacy, there is greater potential for deterioration in teacher performance.

Under NCLB, schools had to show measured growth in ELA and mathematics for schools to make AYP, putting teachers under pressure to raise scores. Teachers and administrators were fearful of being labeled failures for not making AYP, which is both a social stigma and has financial repercussions (Cawelti, 2006). Rating teachers using accountability measures has been related to decreased morale (Callahan & Sadeghi, 2015). Public release of school data affects perceptions of school quality, which may influence the community to demand improvement, creating external pressures (Jacobsen, Saultz, & Snyder, 2013). Under this pressure, teachers reported teaching to the test at the expense of individual student needs (Cawelti, 2006). In the end, teachers and their schools ended up narrowing curricula for fear of not performing well on the measured assessments (Cawelti, 2006).

For decades, teachers have felt pressure to cover content and administer testing in a limited time (Darling-Hammond, 1990). This pressure has led to increased anxiety for teachers, creating worry about their own performances, the performances of their students, and the
perceptions of the public and school administration (M. L. Smith, 1991). Teachers reported pressure to maintain their reputations, fearful of losing professional status and the subsequent humiliation they may feel because of that loss. When administering new assessments aligned to new standards, teachers can be fearful of the student assessment results not meeting expectations and prior success (Seashore Louis, Febey, & Schroeder, 2005). Teachers are afraid of being labeled “bad teachers” (p. 189) and the school losing its reputation as “the good high school” (p. 196). Fear and anxiety are elevated when student and teacher performance is more visible to the public, and anxiety is at its peak when tests are administered (Seashore Louis et al., 2005, p. 189).

In their case study across three states, Seashore Louis, Febey, and Schroder (2005) examined high school teachers’ interpretations of accountability policies and their own efforts to change their practices in accordance with the policies. In one of the schools in the study, teachers believed that there was no need for state standards, since they had strong local monitoring of student progress and high teacher professional accountability. Since the school was high-performing prior to the implementation of new standards and assessments, teachers questioned why they were not acknowledged for their previous success and felt angry that they had to comply with initiatives used for lower performing schools. The school staff wanted to maintain their autonomy, thereby resisting change. Teachers were angry, frustrated, and fearful of the new accountability measures. Teachers appearing resistant were perhaps fearful of losing what was familiar and gaining feelings of anxiety (Burke, 2011). The teachers were anxious that the state standards would not align with their own valued practices. Teachers have expressed being unsure about new examinations and best practices in implementing new standards (Seashore Louis et al., 2005). There were feelings of resentment toward the new standards; such
as the perception of teachers that policy makers were implying teachers lacked the professionalism and capacity to be the decision makers in the education of their students. In addition to feelings of resentment, teachers felt little support for the implementation of the standards from administration.

For teachers in Louisiana, an identified lack of support in building and sustaining their self-efficacy resulted in teachers experiencing “negative arousal events and losses of satisfaction and commitment” (Ford et al., 2015, p. 1). Ford, et al. (2015) interviewed 37 elementary school teachers in a longitudinal study of the effects of Louisiana’s high-stakes evaluation system (HSTE) and the CCSS implementation. The researchers found that teachers had to figure out what was expected of them through the new initiative, which drained time and resources, increasing stress and frustration. In high performing schools, teachers felt as if they “weathered the storm” (Ford et al., 2015, p. 19), focusing on what the CCSS could do to support students. In lower performing schools, teachers felt a loss of self-efficacy. Teachers expressed feelings of being tired, frustrated, and out of control. Ford, et al. (2015) found that the frustration teachers experienced led to teachers leaving the profession. Teachers felt a lack of support for the CCSS and teacher evaluation initiatives. Teachers felt a pressure to perform at higher levels despite a lack of professional development, collaboration time, and feedback. The low policy support for PD and an increased lack of autonomy led to lowered self-efficacy.

In recent years, teachers’ roles have been expanded and intensified as a result of local, state, and federal policies (Valli & Buese, 2007). Teachers work harder than before, with a documented increase in the amount of work done during and outside of school (Day & Leitch, 2001; Seashore Louis et al., 2005). When posed with new standards and assessments, teachers felt a professional responsibility to teach all the material that would be on the assessment,
increasing their level of stress (Seashore Louis et al., 2005). However, they were given little
time and resources needed to fulfill the increased requirements (Fullan, 2007). Lack of time for
teachers experiencing reform has been a documented concern and stressor for teachers (Berryhill
et al., 2009; Hamilton et al., 2007; Skaalvik & Skaalvik, 2011).

Successful educational change uses pressure, but in a positive way, to effect change
(Fullan, 2007). Positive pressure includes adding resources, capacities, and a reduction of
distractors (unnecessary paperwork, ineffective procedures) (Fullan, 2007). Effective change
agents provide sufficient resources, such as curriculum materials, time to plan, and appropriate
staffing (Fullan, 2007).

Educational Policy Implementation

There are two basic descriptions of policy implementation. Reform policies from
policymakers and high-level administrators that are administered by directives to the teachers are
considered top-down implementation. This implies that the people at the top (policymakers)
control the actions of those at the bottom (teachers), and those at the bottom must comply
(Elmore, 1980). Hierarchal control is attempted through legislation, regulation, and monitored
compliance. Policy implementation, Elmore (1980) describes, is a triangle with few
policymakers at the top and many teachers at the bottom, with increasing complexity as the
policy moves down to the teacher’s level. The complexity at the bottom, such as adequate time
and sufficient resources allotted to the policy; current policies already in place; variation in
urgency; and organizational responsibility all contribute to the success or failure of a policy
(Elmore, 1980, p. 14). Due to these complexities, if reform is mandated by administration, from
the top down, change is less likely to happen (Fullan, 2007).
Teachers experiencing top-down initiatives perceive their identities as being under threat (Day & Leitch, 2001). Others feel a loss of professionalism (Lasky, 2005), demeaned, and insulted. Essentially, they feel as if their professional experience is being ignored (Goodson et al., 2006a). In a reaction to a threat to their professional identities, teachers report feelings of disappointment, resentment, hurt, rage, fear, shame, often masking their feelings to their peers and administrators (Day & Leitch, 2001). Teachers may feel uncertain about their influence on students and feel they have little influence or involvement in school-wide matters (Fullan, 2007). A lack of control, Leithwood, Steinbach, and Jantzi (2002) theorized, could result in an effort to gain understanding or to allay any further lack of control. This was supported by research showing teachers acting more as mediators of change (Lasky, 2005) or as compliant in test preparation instead of shifting instructional practice (Goodson et al., 2006a).

Teachers become dissatisfied with the implementation of policy changes when they believe that policy makers did not consider their school and student needs (Goodson et al., 2006a; Seashore Louis et al., 2005). In a survey and interviews of teachers in all 50 states, Scott and Bagaka’s (2006) concluded that teachers felt the standards were not helpful for academically low students. Teachers expressed that the state tests were not capturing the academic progress of students who were academically behind (Scott & Bagaka’s, 2006). Upon experiencing new standards and assessments, teachers identified a lack of clarity and uncertainty about new policies (Seashore Louis et al., 2005). Clarity is often a problem when implementing change (Fullan, 2007). Unclear and unspecified changes can cause anxiety and frustration (Fullan, 2007). Successful reform efforts are found in schools that have leaders who established clear goals and expectations of the changes with teachers collectively working towards the identified goals (Borko, Wolf, Simone, & Uchiyama, 2003).
At times, policy failure is attributed to teacher resistance (Darling-Hammond, 1990). Teachers may resist the change due to the constant inundation of changes in the profession, interpreting the latest change as a passing fad (S. E. Gibson & Brooks, 2012). Fullan reminds readers those teachers who are resistant may have valid ideas that are being ignored (Fullan, 2007). To guide this reform, school administrators should listen to the resistors in an effort to guide the reform (Fullan, 2007, p. 111).

The increased focus and frequency of assessment in the era since NCLB led to environments that placed a high importance on assessment data to determine the quality of instruction. Smith and O’Day (1990) cautioned that when using performance on standardized assessments to gauge the quality of instruction, the tests have “high stakes” (p.243). The “high stakes” may cause teachers to adjust their teaching to improve test scores by teaching to the form of the test. Saeki, Pendergast, Segool, & Embse (2015) suggest new CCSS-aligned standards, assessments, and evaluations may have “unintended negative consequences on teacher well-being, instructional practices, and student learning outcomes” (p.96). They suggested future research should focus on the accountability practices and the relationships to instructional practice.

Conclusion

NCLB and RTTT include accountability measures that incorporate bureaucratic, professional, and market accountability. States and districts need to comply with NCLB legislation for fear of sanctions. Teachers must comply with state standards with the hopes of high student performance on standards-based assessments. Public communication of assessment results attracts the attention of local media, creating pressure from the community. Parent satisfaction is related to school report card data (Jacobsen et al., 2013). When student
performance is subpar, the community expects schools and the teachers to perform better. Well-intended accountability measures may create challenges for schools.

As seen with previous incarnations of ESEA, standards alone do not change instruction. Teachers must connect the standards to their own curriculum and lessons in order to guide student understanding and help students develop the skills and strategies needed to be college and career ready. The implementation of these standards suggests a more learner-centered model of pedagogy, which may require a shift in habits of belief, perceptions, and mindsets of teachers.

The preceding review revealed that educational reform has focused on the implementation of various accountability measures with the hopes of supporting the most vulnerable learners and increasing the achievement of all students. Teachers experienced a variety of reactions to accountability practices: increase in stress, feelings of not being included in the decision-making process, fear of failure, and feelings of anger or resentment. Teachers have reported needing more time to prepare and instruct, and have a noticeable increase in workload. Researchers suggest reformers give time for teachers to implement curriculum before high-stakes tests (McCormick & Ayres, 2009) and fewer reforms over a longer period of time (Clement, 2013, p. 48; Leithwood, Steinbach, & Jantzi, 2002; McCormick & Ayres, 2009). Teachers who have high self-efficacy exhibit behaviors that may allow them to adapt better to the social-emotional effects of educational change.

Successful change, from Fullan’s (2007) educational change theory, includes teachers in the process, provides guidance from the top, and builds capacity at the bottom. Teachers must be provided with sufficient resources, time, and materials to implement change. The greatest influence on whether a policy is implemented successfully is the individual teacher (Elmore,
1980). By examining teacher perception of policy implementation, this researcher aimed to glean more information about teacher implementation in their classrooms.
Chapter 3: Research Design

Policy change, such as standards reform, does not address the issue of changes in instructional practice or changes in school or district culture (Fullan, 2006). Fullan (2006) contends that the change process is incomplete by implementing policy alone. The creation of policy will not necessarily force changes in classrooms that will impact student learning in a positive way, and does not account for the changes to teacher experience. Spillane & Zeuli, (1999) suggested investigating teachers’ patterns of practice when implementing policy to understand the relationship between reform and teaching. Lasting educational change occurs not only when there are new and/or revised materials and new teaching practices, but when there is also a change in beliefs (Fullan, 2007). This study used components of educational change theory (Fullan, 2007) and self-efficacy theory (Bandura, 1993) to examine how teachers perceive the effects of policy changes on their instructional practices as well as their instructional self-efficacy during the change process. The goal of this study was to understand the commonalities and patterns in teacher perceptions of their instructional practices and their self-efficacy as they experienced policy changes.

To explore the perceptions of teachers who have experienced RTTT initiatives, the ideal methodology would be a qualitative case study approach. Through the use of case study methodology, teachers’ lived experiences, thoughts, and feelings can be explored. From prior research, (Ford et al., 2015; Papola - Ellis, 2014; Seashore Louis et al., 2005; M. L. Smith, 1991; Valli & Buese, 2007) teachers’ thoughts and feelings impact their ability to enact instructional change. The exploration will help change agents understand the perceptions of the efficacy of policy changes on instruction, as well as the relationship between teacher self-efficacy and the perceptions of the implementation of policy changes.
Examining teacher self-efficacy can be an intimate process; developing trust between the researcher and the participants is an important component preparing a case study. A case study approach allows the researcher to get close to the participants, allowing their voices to be heard (Creswell, 2012). To depict the lived experiences, case study allows for multiple tools to collect data. In this study, a focus group will provide the primary source of evidence. A documentation review including the examination of professional development documents and standards-based test results informed the focus group questions. Lastly, a survey was administered to provide evidence regarding the participants' self-efficacy beliefs. The use of multiple tools encourages a triangulation of the data, converges the evidence around a finding. The research from this study will document how the instructional practices of teachers in one suburban middle school had been impacted by federal educational policy changes during the Race to the Top era.

Methodology

This was a qualitative, single-case study, designed to examine teachers' perceptions of the impact policy change has had on instruction and the teachers' self-efficacy. Multiple policy initiatives have increased accountability measures, impacting teachers’ social emotional well-being, which may influence their efficacy in the classroom. Through the literature review, it was determined that the teachers’ perceptions of the multitude of policy changes due to RTTT have not yet been explored. This study was designed to collect evidence regarding the complexities of reform efforts and the teachers experiencing these reforms. The research questions guiding this study were 1) How do teachers perceive their instructional practices been impacted since the implementation of RTTT curriculum and assessment initiatives? and, 2) How do teachers perceive their instructional self-efficacy since the implementation of RTTT initiatives?
When research questions are posed as “how” or “why”, a case study approach provides an in depth examination to explain the circumstances (Yin, 2014). The use of a case study methodology allows the participants to “tell their stories” and through the participants’ perspectives, the researcher can understand their actions (Baxter & Jack, 2008, p. 545). Case study method is used for contemporary studies and where the behaviors of the participants cannot be manipulated (Yin, 2009). This embedded case study allowed the researcher to “enrich the thinking and discourse of educators… through the systemic and reflective documentation of evidence” (Stenhouse, as cited by Bassey, 1999, p. 28). The policies that have been implemented are interwoven and complex, therefore, a “complex, detailed understanding” of the issue is needed (Creswell, 2012, p. 48). The examination of teacher instructional experiences and perceptions of self-efficacy documented whether the changes from RTTT policy initiatives have been perceived as changing instructional practices.

The researcher’s role is to help understand and make sense of the teachers’ perceptions that have been created. Through thorough examination of the teachers’ experiences utilizing professional development documentation, standards-based test results, a survey on self-efficacy, and a focus group, the researcher aims to understand the participants and the context in which they work. The researcher is the primary instrument for qualitative research (Merriam, 2007). In this case study, the researcher collected, reviewed, and analyzed professional development documentation, analyzed standards-based test results, administered a survey on self-efficacy and analyzed the results, and facilitated a focus group and analyzed the results. All results were analyzed and triangulated by the researcher. The researcher observed verbal and non-verbal interactions, adjusted based on feedback, member checked with respondents, and dug deeper into unusual responses (Merriam, 2007, p. 5). The researcher is one who may have biases, which was
acknowledged and monitored, since subjectivity may affect the collection, analysis, and interpretation of data.

**Research Design: Qualitative**

This study was designed as a qualitative, single-case study. Qualitative research allows for greater understanding of peoples’ lived experiences and their sense of the world (Merriam, 2009). Policy implementation can be seen as a success, failure, or something in between, depending on the perspective of the participant. The notion that multiple realities can exist is a central philosophy to qualitative research (Creswell, 2011). Writing about the multiple realities is the role of the researcher. To do this, the researcher needs to get close to the participants. The closer the study is to real-life situations with multiple details, the more the research will illustrate the “nuanced view of reality” (Flyvbjerg, 2006, p. 23). A qualitative researcher explores an issue which empowers the voice of the participants (Creswell, 2012).

To learn more about the teachers’ perceptions, qualitative research design provides a means to learn directly from the teachers. Qualitative research allows the researcher to explore the context of the participants (Creswell, 2012). Within qualitative research, the researcher used a case study approach. The case study approach developed from the phenomenological approach to research providing context-dependent knowledge (Flyvbjerg, 2006).

**Research Tradition: Case Study Approach**

Educational research has a long history of qualitative and case study methodology (Merriam, 2007). A single-case study can be used when there is a distinct opportunity, deviating from everyday occurrences, that is worth documenting (Yin, 2014). A case study is where the focus is on the case itself, because the case represents a unique situation (Creswell, 2012). The
implementation of the ESEA policies and RTTT initiatives are part of contemporary educational policy. Across the United States, students take assessments aligned to new standards and teacher professional evaluations may be tied to the results of the standards-based assessments. Implementation of the three accountability measures (standards, assessments, and evaluations) can have implications on the daily life of teachers, both in their instruction and well-being. Utilizing a case study approach allows the researcher to get close to the subject of interest (Bromley, as cited by Merriam, 2009).

In this study, the research questions are posed to explore “how” teachers have perceived the policy implementations. Researchers get more information about the “why” and “how” of problems within a bounded area when using a case study approach of qualitative design (Merriam, 2007; Yin, 2009). In accordance with Yin’s (2014) description of case study approach, this study has no influence on the behaviors of the participants, yet allows for direct observation of the events being studied.

The researcher utilized the case study approach developed by Robert K. Yin (2014). Yin has developed a methodological approach for case study that will provide the researcher a model that promotes trustworthiness. His writings about case study methodology for over 30 years have shaped case study research into a valuable research model. Other case study theorists have informed the methodology. Merriam (2007, 2009) and Stake (1995) have provided the foundations of qualitative and case study research design. Yin theorized that case study is defined as an “empirical inquiry” (p. 16) that (a) “investigates a contemporary phenomenon in depth and within its real world context” and (b) “the boundaries between the phenomenon and the context may not be clearly evident” (Yin, 2009, p. 16). The boundaries of a case study must be “intrinsically bounded”, meaning that there is a limit to the number of people who can be
interviewed or the time in which the study can take place (Merriam, 2007, pp. 27–28). When there is particular interest in the subject itself, the case is “intrinsic” (Stake, 1995, p. 3). Stake (1995) describes perspective cases as the people and programs within the boundaries of a system. The case study approach examines a phenomenon within a bounded context thus making the case the unit of analysis (Miles & Huberman, 1994). The case study approach allows researchers to “thoroughly understand” the case (Stake, p. 9).

This case examined the implementation of multiple policies in a suburban middle school by examining teacher perspectives concerning their instructional practices and self-efficacy (Figure 1). To understand the contemporary event in this case, the implementation of RTTT policy, the researcher collected and reviewed professional development documentation and standards-based test results, administered a survey on self-efficacy, and facilitated a focus group, and analyzed the results.

**Context:** Race to the Top Policy Implementation at Connecticut Suburban Middle School

**Case:** Teachers perception of instructional impact related to Race to the Top policy implementation

**Embedded Focus:** Teachers’ perceptions of their self-efficacy concerning changes in instructional practices resulting from implementation of Race to the Top policies concerning curriculum and assessment.

*Figure 1:* Case Study Design (Yin, 2014, p. 50)

In order to have a coherent understanding of the perspectives of the participants, context must be considered (Baxter & Jack, 2008). Educators teaching in the RTTT era are experiencing a unique situation where in a short period of time, the state has adopted the CCSS, adopted a new teacher evaluation process, and administered the Smarter Balanced Assessment in grades 3
through 8. In this case, the instructional decisions of teachers cannot be considered without the context, the school and classroom settings, and the changes taking place in those settings. This case study provides a snapshot of teacher perceptions of their instructional practices and their efficacy, as impacted by policy. Case studies allow for exploration of the complexities of reform efforts (Borko et al., 2003). This case study is explanatory, since the researcher is seeking to explain the relationship among teachers’ perceptions of their efficacy, their perceptions of their instructional practice, and the perceptions of policies. This complex relationship between the perceptions and actions may not be answered through the results of a survey.

**Participants**

The participants are four teachers licensed to teach at the middle school level. Participants will be selected using purposive homogenous sampling. Qualitative studies often use purposive sampling that give more coherence, rather than random sampling (Miles & Huberman, 1994). Purposeful sampling allows the researcher to select people who can help explain the phenomenon (Creswell, 2011, p. 206). This study will be conducted at a public school district in southwestern Connecticut. The teachers in this school district are all certified educators in their respective content areas. The school district serves approximately 7,000 students, in grades Pre-K-12. The district is 78.3% white, 9.8% of students are characterized as students with disabilities, and 9.2% of students are Eligible for Free or Reduced-Price Meals, and 1.9% English Language Learners. The Connecticut Mastery Test scores were consistently above state averages. In 2012 and 2013 the middle schools in the selected school district were recognized as “Schools of Distinction” by the State of Connecticut for the highest overall performance on the Connecticut Mastery Test.
The selection of this suburban district is purposeful. In the spring of 2014, schools in the state of Connecticut administered the first Smarter Balanced Assessment in English Language Arts and Mathematics. When compared to other districts in the District Reference Group (DRG), the average scores on the Smarter Balanced assessment results were ranked lower than most schools. Out of the 19 districts in the DRG, the selected school’s Grade 7 average scores ranked 19th in ELA and 17th in Mathematics. Grade 8 average scores were ranked 19th in both areas.

The following school year, the Smarter Balanced assessment was administered, again. The student scores increased from the previous year, with student in the class of 2020 cohort earning average scores that ranked 2nd out of 19 districts in the DRG both in Literacy and Mathematics. The growth in student performance on the Smarter Balance Assessment was the fourth highest in the state, 15.8% over the previous year. The suburban middle schools selected will allow the researcher to focus on the policies the school has implemented supporting this increased performance with acknowledgement that the district has the resources to implement new initiatives.

The Smarter Balanced assessment for English Language Arts is aligned to the Connecticut Core Standards for Mathematics and Connecticut Core Standards for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects. The ability to read, write, and speak effectively is needed in all disciplines. In the 2014-2015 school year, the selected district set a goal of strengthening student achievement with an emphasis on reading and writing across the disciplines. Teachers of history/social studies, science, and technical subjects as well as other subject areas have the onus of developing student literacy
skills. To implement the new literacy standards, teachers may have to reflect on their current beliefs and habits and may shift their instruction.

The new standards require that all students participate in standards based assessments each year in grades 3 through 8, and in Grade 11. High school teachers do not have the annual grade level tests that the teachers in a middle school experience. Middle school teachers had students participate in the standards based assessment pilot in 2014, the full assessment in 2015 and 2016. Teachers in this grade span experience the greatest number of standards-based tests, Connecticut Mastery Test in Science, and Smarter Balanced English Language Arts and Mathematics.

Using a homogenous sample, selected teachers will have taught middle school on or prior to the 2012-2013 school year. Homogenous sampling reduces the range of variation among the participants, which will highlight their similarities. In this study, the researcher seeks to understand the perspectives of teachers. Including teachers and not administrators through homogenous sampling allow for greater focus on teachers’ individual and collective experiences and will facilitate group interviews (Miles & Huberman, 1994).

By selecting teachers who have taught on or before the 2012-2013 school year assured the inclusion of teachers who taught the year before the Smarter Balanced test was administered. In this case, the researcher wanted to describe the perceptions of middle school teachers in depth. To do this, the participants selected should have defining characteristics. Within the middle school teaching population it was important to hear from teachers who have seen the implementation of RTTT policies. Therefore, the selected participants would have taught before and after the implementation of the standards based assessment administration.
Since the Smarter Balanced test has test sections in English Language Arts and Literacy and Mathematics aligned to the new Connecticut Core Standards, teachers in those disciplines will be included in the sample. Since the policy implementation of evaluation, standards, and assessments impacts teachers in a variety of content areas, it is important to include teachers who specialize in content areas other than ELA and mathematics. The different content area backgrounds of the participants allowed the voices of the teachers who are directly and indirectly impacted by the new standards and assessments to be heard. This school district selected utilized “team” configurations in each middle school for every grade level. The middle school “team” had a member from each major content area (science, social studies, English language arts, math) as well as two teachers in non-major content areas. Schools that use the “team” configuration have the teachers meet regularly. The teachers selected will not need to be on the same team; however, the teachers selected are assigned to teams within their respective schools. By examining a cross-section of middle school teachers, some teachers are directly impacted by the administration of the Smarter Balanced test, some indirectly.

**Sample size.** A focus group was be convened with four teachers from either of the two middle schools within a high performing, suburban, and public school district. Previous research has suggested a minimum of four (Creswell, 2012) to a maximum of ten (Krueger & Casey, 2002) participants in a focus group. Unlike survey research, where formulas are used to determine the number of participants to use, the number of participants needed depends on what information was obtained. To assure that the teachers whose subject areas have had standards based reforms, at least two participants, one each from English Language Arts (ELA) and mathematics.
**Limitations on sample size.** A small sample does have limits on generalizability. However, case study does not involve generalizing from a sample to the greater population (Creswell, 2012). The purpose of the study was to explore and understand the perceptions of a particular group of teachers. A sample of four participants provided a large enough sample to fulfill the desired requirements, allowing for the voices of the participants to be explored in depth, yet small enough that each participant had the opportunity to share his/her perspectives. The sample size selected allowed the researcher to collect extensive details about the case and its context (Creswell, 2012). The inclusion of multiple participants ensured that alternative points of view were being explored and evaluated (Rubin & Rubin, 2012). It is important to show balance and thoroughness in the focus group interview process.

**Recruitment and Access**

All participants were volunteers. The researcher is an employee in the district and selected participants from the two middle schools in the district. Access was obtained by contact via email with the Superintendent of Schools (Appendix A) and Building Principals (Appendix B). Teachers of Grade 6 through Grade 8 students had students take the Smarter Balanced assessment in sixth, seventh, and eighth grades, and the Connecticut Mastery Test in Grade 8. A screening tool (Appendix C) and letter (Appendix D) was sent to middle school teachers of ELA, mathematics, social studies, and science through which enabled the researcher to select the participants. The screening tool allowed the researcher to identify the qualifications of the focus group interviewees (Krueger & Casey, 2002). The screening tool included questions regarding the teacher’s work history. Teachers were solicited to determine the length of time he or she has taught the subject area and grade level of instruction. Teachers were asked if they have prepared students for the Smarter Balanced Assessment and the Connecticut Mastery Test.
Participants selected may be from different teams in the district. However, all teachers selected were classroom teachers who met regularly with a team. The selected teachers must have taught on or before the 2012-2013 school year. By selecting teachers who have been employed since 2012-2013, it ensured that the participants have taught when the CT Core Standards were implemented. The teachers must have taught middle school since 2012-2013 school year. This ensured that any changes made to instructional practice were not due to a change in teaching duties.

To protect the participants, pseudonyms of the district, school, and the participants were provided. Ethical considerations were addressed to protect the participants. Participants signed a consent form prior to the data collection (Appendix E). In this consent form, the participants were made aware that their participation was voluntary and refusal to participate will not result in any penalty. The researcher does not supervise any participants, nor will participation in this study affect the performance evaluation of the participants. Additionally, the participants were informed that they are able to discontinue participation at any time.

Data Collection

Researchers who implement a case study approach collect multiple sources of evidence, and are guided by prior theory (Yin, 2014). The goal for case study data collection is for the evidence to “converge and to triangulate over a given fact” (Yin, 1999, p. 1217). Case studies allow researchers to collect data through multiple sources of information, such as interviews, observations, documents, audiotapes, and videotapes (Creswell, 2012). The use of multiple resources helped to strengthen the trustworthiness of the evidence. A case study protocol, the researcher’s line of inquiry, promotes triangulation and increases dependability (Yin, 1999).
In this case, the data collection followed a sequential procedure (Figure 2). The primary data set was collected from a focus group interview. To inform the focus group interview, a review of assessment results and professional development documents was completed and a self-efficacy survey was administered to the participants. The researcher had an opportunity to review notes from the data collection and proceeded to conduct analysis of the data. The use of multiple sources of evidence provided the researcher with a greater understanding of teacher perceptions of educational change.

**Figure 2.** Data Collection Procedure

**Standards-based test data.** First, standards-based assessment data were be examined. Test results for the Class of 2021 cohort of students will be examined for years 2014-2015, 2015-2016, and 2016-2017. This cohort of students experienced the initial Smarter Balanced assessment in grade 6, as well as the full assessments in grade 7 and 8. Fullan (2007) highlighted the need for teachers to examine student performance, its relation to instructional practices, and areas of improvement.

The researcher examined Smarter Balanced ELA, Smarter Balanced Math for percentage growth over time. By identifying areas of growth, the data will inform the questions the researcher poses to the focus group. Smarter Balanced ELA/Literacy test assesses mastery of three areas of knowledge and skills: Reading, Writing and Research/Inquiry, Listening. Smarter Balanced Mathematics test assesses mastery of three areas of knowledge and skills: Concepts
and Procedures, Problem Solving and Modeling & Data Analysis, Communicating Reasoning. This data will be compared to the focus group responses regarding teachers’ perceptions of student achievement.

**Professional development documentation review.** Documents was collected, allowing the evidence collected to be used during the focus group interviews where participants can discuss the results (Rubin & Rubin, 2012). Documents were related to specific policy initiatives: 1) curriculum alignment of ELA and Mathematics to the Common Core State Standards from 2011-2015, 2) the administration of the standards-based Smarter Balanced Assessment in 2013-2015, 3) the implementation of the revised evaluation plan in 2013-2014. The documentation review included professional development documentation related to standards and assessment. Professional development documents related to the implementation of new teacher evaluation plan was also examined. Teachers’ individual plans were not be included in this data set.

By examining the professional development documents, the researcher developed an understanding of the supports teachers have received with regard to policy changes as well as how the changes were communicated to them. Documentation collected demonstrated the type and frequency of professional development provided to teachers. Successful educational change occurs when capacity is built through effective professional development (Fullan, 2000). Professional development that builds self-efficacy will build internal capacity in the school for lasting change.

**Survey.** The focus group and documentation may not provide sufficient evidence regarding teacher self-efficacy. To understand the efficacy of the participants, a survey was administered. In looking for an instrument, the researcher referred to “Teacher Efficacy: Capturing an Elusive Construct” in which Tschannen-Moran & Hoy, (2001) describe an
instrument they developed to be used to measure teacher efficacy. The long-form scale has twenty-four questions with Likert-type responses. The Teacher Sense of Self-Efficacy Scale (TSES) was constructed to include several subscales: efficacy in student engagement, efficacy in instructional practices, and efficacy in classroom management. The inclusion of three subscales provides the researcher with the opportunity to examine subsets of teacher self-efficacy. The researcher has permission to use the TSES in this study (Appendix G) and the survey questions are included (Appendix F). The survey was completed online, using SurveyMonkey.com (http://www.surveymonkey.com). This online service allowed the researcher to collect the data efficiently, while allowing the participant to complete the survey in a location of their choosing.

**Focus group.** Qualitative researchers often use interviews of the participants as a means to collect data to examine a problem of practice and answer related research questions. The use of interviews can provide insight into the experiences, thoughts, feelings, and motivations of the research participants (Rubin & Rubin, 2012). The data collected through interviews provided a context and narrative that quantitative data does not provide. To support the researcher in examining the perspectives of teachers, a focus group allowed the researcher to collect a shared understanding of the participants as well as individual views (Creswell, 2011, p. 218). Focus group interviews are useful when examining group perspectives of events that have occurred (Yin, 2014). Also, focus groups allowed for both individual answers as well as discussion among participants (Yin, 2014). Participants who may be hesitant to respond may do better when there are peers around to discuss the questions (Creswell, 2012).

The focus group was be done in an off campus location the participants agreed upon. Having the interview in a location that is familiar to all participants will create a comfortable environment (Krueger & Casey, 2002). The environment selected will be a quiet environment
suitable to audio recording (Creswell, 2012). The meeting was digitally recorded using an iPhone. The participants engage in self-reflection and critical discourse regarding the supports they have been provided and need, changes in their instructional practice, as well as how and what data results have informed their instruction. During the interview, brief notes were taken as a backup, in case of technical issues with the digital recording. Brief notes also allowed the researcher to document interactions between focus group members, and the context of the interview.

During the focus group, the researcher served as an interviewer. It is important that the researcher has the ability to “ask good questions” and “interpret the answers fairly”, “be a good listener” and not held to preconceptions, “stays adaptive”, has “a firm grasp of the issues”, and “avoids biases” (Yin, 2014, p. 73). Treating each teacher as an individual, with his or her own needs, strengths, and views can helped to build the research. Asking participants about their own experiences or about a hypothetical example will limit the influence the questions have on their answers (Rubin & Rubin, 2012). Probing questions may be asked of the participants based on their responses.

The collection and recording of data was done using interview protocols. When collecting data, it is important for researchers document any interviews or observations. Developing an interview protocol assists the researcher to identify the questions that are asked of the participants and a means for recording notes and observations. The protocol (Appendix H) includes the list of participants, the length of time of the interview, any introductory information, and icebreakers, as well as questions to be asked. When developing questions, Rubin & Rubin, (2012) warn against imposing one’s preconceptions on the interviewees that might limit or bias their answers. To do this, Rubin & Rubin (2012) suggest using a tour question, which is a type
of question in which the interviewee is asked to describe their activities, talk in general terms, or present their own knowledge. There are also mini-tour questions, which are more focused. The researcher will pose predetermined questions and also supplemental questions informed from the document review.

The two research questions focus on the perception of instructional practices and instructional efficacy resulting from policy changes. Stake, (1995) stated that data collection needs to be guided by the research questions, and to engage with the subject of interest with a balance of sensitivity and skepticism. To address these research questions, the researcher collected data regarding the implementation of policy changes at the school site. The professional development documentation review would likely determine the depth and breadth of supports provided to teachers. The test result data review allowed the researcher to identify areas of strength and areas in need of improvement, for use in the focus group interview. Using both survey and focus group data, individual perceptions of instructional practice and self-efficacy were collected. Questions were developed to address each research question and were aligned to the components of the theoretical framework. The focus group interview questions were developed to align with the theoretical framework as identified in Table 1.
Table 1.

*Predetermined Focus Group Interview Questions*

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Theoretical Framework Themes</th>
<th>Focus Group Interview Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) How do teachers perceive their instructional practices been impacted since the implementation of RTTT curriculum and assessment initiatives?</td>
<td>Include staff in the change process</td>
<td>1 Describe your involvement in the new standards, Smarter Balanced assessment, and evaluation plan (ex. have you served on any committees, written curriculum, provided training, etc.).</td>
</tr>
<tr>
<td></td>
<td>Develop internal capacity</td>
<td>2 Describe any professional developed you have received with regard to the new standards, standards-based test, and evaluation plan.</td>
</tr>
<tr>
<td></td>
<td>Build internal accountability linked to external accountability</td>
<td>3 Describe your experience with the implementation of the new evaluation plan.</td>
</tr>
<tr>
<td></td>
<td>Create positive pressure by removing excuses</td>
<td>4 Describe any supports have you received with regard to the new standards, standards-based test, and evaluation plan.</td>
</tr>
<tr>
<td></td>
<td>Build public confidence</td>
<td>5 What has been your experience with the school and community reaction to the Smarter Balance and CT Core Standards implementation?</td>
</tr>
<tr>
<td></td>
<td>Changes were made in materials, practice, and beliefs.</td>
<td>6 Describe any changes to the materials (curriculum, textbooks, technology, etc.) that you are using since the implementation of the new standards, and assessments?</td>
</tr>
<tr>
<td></td>
<td>Changes were made in materials, practice, and beliefs.</td>
<td>7 Describe your instructional practice in preparing students for the Smarter Balanced assessment, compared to the prior assessment, the Connecticut Mastery Test.</td>
</tr>
<tr>
<td></td>
<td>Changes were made in materials, practice, and beliefs.</td>
<td>8 In looking at student assessment data, there was an increase in the Class of 2020 Cohort achievement results. What do you notice about the data results? How did the growth happen?</td>
</tr>
<tr>
<td>2) How do teachers perceive their instructional</td>
<td>Teachers were provided with mastery and vicarious experiences</td>
<td>9 Of the professional development you have received which, if any, has had the most meaningful impact on your instruction.</td>
</tr>
</tbody>
</table>
| self-efficacy since the implementation of RTTT initiatives? | School leaders use social persuasion  
Teachers did not have an increase in emotional arousal  
Teachers with strong self-efficacy provide students with opportunities to master content | 10 | How would you describe the culture and climate of your school during the implementation of the new standards, assessment, and evaluation plan?  
How is preparing for the Smarter Balanced Assessment the same or different than preparing students for the CMT Assessments?  
Has your ability and effectiveness to instruct been influenced by the new standards and assessments? If so, how?  
Has your ability to engage, motivate, and support students been influenced by new standards and assessments? If so, how? |
|---|---|---|---|

### Data Storage

Stake, (1995) stresses the importance of organization during data collection. Data will be transcribed via the Rev.com and coded using MAXQDA 11, then downloaded and stored electronically in a secure Google Drive location. Data collection of signed consent forms, documentation, audio, video, and notes of the focus group interview will be saved digitally in a Google Drive location. Each file has an additional password, for security. Pseudonyms were utilized for all participants, the school, and the district to assure confidentiality. All audio was transcribed, coded, and de-identified. Access to transcribed data will be restricted to the researchers. Electronic files will be held on an online electronic storage database with password protection. After three years, all audio recordings, interview transcripts, and data with
identifiable information will be destroyed. Hard copies of consent forms will be held for three years after completion of the study. All data will be destroyed using deletion of data.

Data Analysis

In this study, teachers in a suburban Connecticut middle school experienced a multitude of changes to curriculum, assessment, and evaluation as a result of RTTT policy and resulting legislation. The theoretical framework of educational change and self-efficacy theory along with the literature review suggested to the researcher that data analysis would show teachers implementing change initiatives need support, through clear communication, they need engagement in the change process, need time to implement changes, and need resource and materials. A successful shift occurs when teachers use student achievement data to inform instruction. Data analysis would show that in effective policy implementation, teacher social-emotional well-being is considered. Lasting educational change will be evidenced by student achievement data combined with data supporting shifts in teacher instruction while maintaining teacher self-efficacy and well-being.

Before starting a case study, Yin (2014) advises selecting a strategy for analyzing the data. Yin (2014) suggests implementing a cyclical process to analyzing data, starting with reviewing the research questions, handling and analyzing data, stating findings, and drawing conclusions. To start searching for patterns, data can be reduced through writing summaries, coding, finding themes, grouping data, and summarizing as part of the analytic process (Miles & Huberman, 1994). Data can then be displayed in matrices, memos, arrays, graphs, or charts, to provide a visual display of the relationships, helping to derive conclusions (Miles & Huberman, 1994). In this study, charts and tables were used to display and analyze data. The initial findings
and conclusions were then related back to the research questions, which may require continued handing and interpretation of the data.

In a linear flow chart representing data collection and analysis for this study (Figure 3), teachers in a suburban Connecticut middle school who have experienced RTTT policy implementation provides the context for the data collection. Evidence was collected from various sources. Student assessment data was collected in the first data set and analyzed. Professional development documentation was collected and a survey was administered to participants for the second data set and analyzed. The data analyzed informed the focus group interview questions and provided context to the teacher responses. The focus group was facilitated, data collected, transcribed, coded, and analyzed. The data was triangulated to determine outcomes.

Figure 3. Flow chart for data collection and analysis (Adapted from Yin, 2014, p. 155)

The supporting evidence from the standards-based test data, professional development document review, and the survey informed the researcher as to the support the teachers received, the alignment of instruction to the CT core standards, and the self-efficacy background of the participants. The primary data set for this study was the focus group, which allowed the
researcher to explore the teachers’ perceptions and beliefs of themselves and the implementation of the policies. The supporting data sets (student achievement data, document review, and survey data) and the primary data (focus group) were analyzed to determine if the teachers have received appropriate support, if the assessments reflect any deficiencies in student learning, and the level of self-efficacy of the participants.

**Coding.** After the data collection, it was be coded by hand and electronically using Computer Assisted Qualitative Data Analysis (CAQDAS), specifically MAXQDA 11. An electronic data analysis tool, such as MAXQDA 11, provides an efficient way to store, organize, and retrieve data. The Voice Memos App provided a means to transcribe audio recordings, which were then used for coding. Saldaña (2012) suggested utilizing a combination of coding methods. The researcher will hand code each data source.

Each set of data analyzed through two cycles. Data reduction and coding was framed by the theoretical framework on educational change and self-efficacy and analyzed for patterns. Between and within each set, codes may be reduced or added based on emergent themes. The student assessment data and the survey were analyzed using Descriptive Statistical Analysis. Data from the document review, survey, and interviews were coded through a combination of Structural, Descriptive, and In Vivo coding methods. The data source, the person responsible for analysis, and the type of coding or data analysis are organized in Table 2.
Table 2.

Sources of Data and Strategy for Data Reduction and Coding

<table>
<thead>
<tr>
<th>Data Source</th>
<th>Reduced or Coded By</th>
<th>First Cycle Coding or Analysis</th>
<th>Second Cycle Coding or Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smarter Balanced and Connecticut Mastery Test results</td>
<td>Connecticut State Department of Education; Researcher</td>
<td>Descriptive Statistical Analysis</td>
<td>Magnitude Coding</td>
</tr>
<tr>
<td>Professional Development Documents</td>
<td>Researcher</td>
<td>Structural</td>
<td>Descriptive</td>
</tr>
<tr>
<td>Self-Efficacy Survey</td>
<td>Researcher</td>
<td>Descriptive Statistical Analysis</td>
<td>Descriptive</td>
</tr>
<tr>
<td>Focus Group Interviews</td>
<td>Researcher</td>
<td>Structural</td>
<td>In Vivo</td>
</tr>
</tbody>
</table>

The coding of data sources in qualitative research is methodical and rigorous. Themes within the theoretical framework from educational change (Fullan, 2007) and self-efficacy (Bandura, 1977) theories have been identified and matched to pre-determined codes. Themes related to educational change have been coded with EC, whereas themes related to self-efficacy have been coded with SE. The researcher reviewed the data sets for the tenets of the theoretical framework. The themes include five components of educational change (Fullan, 2007): inclusion, capacity, accountability, pressure, and change. Additionally the four major psychological processes affected by self-efficacy (Bandura, 1997): ability, emotion, motivation, and selection along with two major sources of efficacy: experiences and communication. Within each of these themes, codes were determined and related to the research questions (Appendix I). When analyzing the survey data and professional development documents, the evidence was coded using the predetermined codes and themes. Themes may be reduced or expanded during
the coding process. Subsequently, during the analysis of the focus group data, the researcher looked for the same phrasing, codes, and themes to emerge.

**Analysis of standards-based assessment data.** The student assessment data was be used to inform the context of the case study. In analyzing Smarter Balanced and Connecticut Mastery Test results, the Connecticut State Department of Education as well as the researcher performed descriptive statistical analysis of the data set. For each area on the Smarter Balanced Assessment, students are identified as achieving above, at/near, or below standard. Students are given a score from 1 to 4, where a score of 3 is defined as meeting the achievement standard. The researcher, in the first cycle of coding, incorporated descriptive statistical analysis. In the second cycle of analysis, magnitude coding was used to quantify the intensity and directionality of the results. For each standards based assessment, the researcher used descriptive statistical analysis to look at student performance data (Table 3, Table 4). The data results were examined for patterns and trends. Using the results, the researcher phrased focus group questions to determine what changes, if any, led to the student performances on the standards-based assessments. The data results provided evidence to the alignment of instruction to the CT core standards and informed the focus group questions.

Table 3.

**Smarter Balanced - English Language Arts Data for Class of 2021 Cohort**

<table>
<thead>
<tr>
<th>Smarter Balanced ELA</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Percent Meeting or Exceeding Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015-2016</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014-2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013-2014</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 4.

**Smarter Balanced - Mathematics Data for Class of 2021 Cohort**

<table>
<thead>
<tr>
<th>Smarter Balanced Math</th>
<th>Level 1</th>
<th>Level 2</th>
<th>Level 3</th>
<th>Level 4</th>
<th>Percent Meeting or Exceeding Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>2015-2016</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014-2015</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013-2014</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Coding of professional development documents.** In coding the collected professional development documents, the first cycle of coding will consist of structural coding. Structural Coding relates the data to a specific research question (Saldaña, 2012). In the first cycle of coding, the researcher examined the data for the expected codes to emerge. After the first cycle, the researcher identified emergent themes and expanded the list of themes to add new codes, or codes be reduced or combined. The data was reanalyzed. This process continued until the researcher identifies the emergent themes. After the first cycle is complete, a second cycle of coding is used “to develop a sense of categorical, thematic, conceptual, and/or theoretical organization” from the codes (Saldaña, 2012, p. 207). In the second cycle of coding, themes were reduced or expanded using descriptive coding. Descriptive coding assigns a noun or phrase for a topic identified in the data, not specific content (Saldaña, 2012). It is the duty of the researcher to review the data, looking for obvious and less obvious concepts and relationships. The codes and themes identified from the document review were be used to inform the focus group (Table 5).
Table 5.

Professional Development Document Review Expected Themes and Codes

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Professional Development (PD) Document</th>
<th>Themes (code)</th>
<th>Sub-Themes (codes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) How do teachers perceive their instructional practices been impacted since the implementation of RTTT curriculum and assessment initiatives?</td>
<td>PD Documents on CT Core Standards</td>
<td>INCLUSION Include staff in the change process (EC-INC)</td>
<td>Professional Development (EC-INC-PD)</td>
</tr>
<tr>
<td>PD Documents on Smarter Balanced Assessment</td>
<td></td>
<td>CAPACITY Develop internal capacity (EC-CAP)</td>
<td></td>
</tr>
<tr>
<td>PD Documents on Teacher Evaluation Plan</td>
<td>PD Documents on CT Core Standards</td>
<td>ACCOUNTABILITY Build internal accountability linked to external accountability (EC-ACC)</td>
<td>Testing (EC-ACC-TEST)</td>
</tr>
<tr>
<td></td>
<td>PD Documents on Teacher Evaluation Plan</td>
<td>PRESSURE Create positive pressure by removing excuses (EC-P)</td>
<td>Resources (EC-P-R)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Time (EC-P-T)</td>
</tr>
<tr>
<td>2) How do teachers perceive their instructional self-efficacy since the implementation of RTTT initiatives?</td>
<td>PD Documents on CT Core Standards</td>
<td>EXPERIENCES Teachers were provided with mastery and vicarious experiences (SE-EXP)</td>
<td>Workshop (SE-EXP-W)</td>
</tr>
<tr>
<td>PD Documents on Smarter Balanced Assessment</td>
<td></td>
<td>COMMUNICATION School leaders use social persuasion (SE-COM)</td>
<td>Feedback (SE-COM-FB)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Vision (SE-COM-VIS)</td>
</tr>
</tbody>
</table>
Coding of survey data. The survey data was collected using Survey Monkey. This provided the researcher the ability to analyze the data using descriptive statistics. The data was transferred to MAXQDA 11 for coding and further analysis. In the first cycle of coding, the data was analyzed using basic descriptive statistics to inform the researcher regarding the participant’s self-efficacy beliefs. In the second cycle, the survey data was coded based on pre-determined codes aligned to the theoretical framework component of self-efficacy (Bandura, 1993).

Survey questions are correlated to three self-efficacy factors: Efficacy in Student Engagement, Efficacy in Instructional Practices, and Efficacy in Classroom Management (Table 7). In the first cycle, survey results will be analyzed using descriptive statistics determining the unweighted means of the items that load on each subgroup. Utilizing the subscale indicators identified by Tschannen-Moran and Hoy (2001), responses were analyzed for patterns and trends for each participant and among the group of participants. This data was be used by the researcher to provide a broader understanding of the self-efficacy of the participants that may not be disclosed during the focus group interview.
Table 7.

**TSES survey questions and self-efficacy subgroups**

<table>
<thead>
<tr>
<th>Survey Question</th>
<th>Efficacy in Classroom Management</th>
<th>Efficacy in Instructional Practices</th>
<th>Efficacy in Student Engagement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How much can you do to get through to the most difficult students?</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>2. How much can you do to help your students think critically?</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>3. How much can you do to control disruptive behavior in the classroom?</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. How much can you do to motivate students who show low interest in school work?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. To what extent can you make your expectations clear about student behavior?</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. How much can you do to get students to believe they can do well in school work?</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>7. How well can you respond to difficult questions from your students?</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>8. How well can you establish routines to keep activities running smoothly?</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. How much can you do to help your students value learning?</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>10. How much can you gauge student comprehension of what you have taught?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. To what extent can you craft good questions for your students?</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>12. How much can you do to foster student creativity?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. How much can you do to get children to follow classroom rules?</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>14. How much can you do to improve the understanding of a student who is failing?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. How much can you do to calm a student who is disruptive or noisy?</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. How well can you establish a classroom management system with each group of students?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. How much can you do to adjust your lessons to the proper level for individual students?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>18. How much can you use a variety of assessment strategies?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19. How well can you keep a few problem students from ruining an entire lesson?</td>
<td>✓</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20. To what extent can you provide an alternative explanation or example when students are confused?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21. How well can you respond to defiant students?</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>22. How much can you assist families in helping their children do well in school?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>23. How well can you implement alternative strategies in your classroom?</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>
24. How well can you provide appropriate challenges for very capable students? ✓

Within each subgroup, the questions were analyzed for words and phrases that are indicative of the subgroup and align with the theoretical framework. Codes were developed for the four processes that are affected by self-efficacy: ability, emotion, motivation, selection, ability. Questions in the survey may incorporate one or more of the processes (ability, cognitive, motivation, selection) affected by self-efficacy (Table 8). A full listing of codes and abbreviations with alignment to the theoretical framework can be found in Appendix I.
Table 8.

Self-Efficacy Survey Questions and Expected Themes and Codes

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Survey Subgroups and Questions</th>
<th>Theme (Code)</th>
<th>Sub-Theme (Code)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2) How do teachers perceive their instructional self-efficacy since the implementation of RTTT initiatives?</td>
<td><em>Efficacy in Student Engagement</em> 1,2,4,6,9,12,14, 22</td>
<td>MOTIVATION</td>
<td>External (SE-MOT-EXT)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Teachers with high self-efficacy have the ability to engage, motivate, and support students (SE-MOT)</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Efficacy in Instructional Practices</em> 7,10,11,17,18,23,24</td>
<td>SELECTION</td>
<td>Activities (SE-SEL-ACT)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Teachers with strong self-efficacy provide students with opportunities to master content (SE-SEL)</td>
<td></td>
</tr>
<tr>
<td></td>
<td><em>Efficacy in Classroom Management</em> 3,5,8,13,15,16,19, 21</td>
<td>ABILITY</td>
<td>Control (SE-ABL-CTL)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Teachers with high self-efficacy ability to handle complex tasks and are confident in their ability to instruct (SE-ABL)</td>
<td></td>
</tr>
</tbody>
</table>

The results informed the focus group questions and data analysis. Based on findings from the survey data analysis, the researcher may ask questions during the focus group that delve deeper into the self-efficacy of the participants. The results from the survey were be used to provide context to the participant’s self-efficacy identity as the researcher analyzes the participant’s focus group responses.
**Coding of focus group data.** To organize the focus group data, the researcher used Structural coding. The codes that have been identified for the focus group questions were informed by the codes designated in previous data sets: the professional development document review and self-efficacy survey. Initially, the data was reviewed for the anticipated themes that are expected to emerge and used the predetermined codes within those themes (Table 9). Abbreviations for codes and alignment of codes to the theoretical framework are found in Appendix I. Although the researcher was determining expected themes, there were themes that emerged through the focus group interviews that were not initially identified.
Table 9.

Focus Group Interview Questions and Expected Themes and Codes

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Focus Group Interview Question</th>
<th>Theme (Code)</th>
<th>Sub-Theme (Code)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) How do teachers perceive their instructional practices been impacted since the implementation of RTTT curriculum and assessment initiatives?</td>
<td>Describe your involvement in the new standards, Smarter Balanced assessment, and evaluation plan (ex. have you served on any committees, written curriculum, provided training, etc.).</td>
<td>INCLUSION</td>
<td>Professional Development (EC-INC-PD)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Team (EC-INC-TEAM)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Collaboration (EC-INC-COL)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Participant (EC-INC-PART)</td>
</tr>
<tr>
<td>2</td>
<td>Describe any professional developed you have received with regard to the new standards, standards-based test, and evaluation plan.</td>
<td>CAPACITY</td>
<td>Standards (EC-CAP-STD)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Workshop (EC-CAP-W)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Training (EC-CAP-TR)</td>
</tr>
<tr>
<td>3</td>
<td>Describe your experience with the implementation of the new evaluation plan.</td>
<td>ACCOUNTABILITY</td>
<td>Testing (EC-ACC-TEST)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Evaluation (EC-ACC-EVAL)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Used Student Data (EC-ACC-DATA)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Resources (EC-P-RES)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Time (EC-P-TIME)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Support (EC-P-SUP)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Professional Learning Community (EC-P-PLC)</td>
</tr>
<tr>
<td>4</td>
<td>Describe any supports have you received with regard to the new standards, standards-based test, and evaluation plan.</td>
<td>PRESSURE</td>
<td>Community Pressure (EC-CON-COM)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Parental Pressure (EC-CON-PAR)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Feedback (EC-CON-FB)</td>
</tr>
<tr>
<td>5</td>
<td>What has been your experience with the school and community reaction to the Smarter Balance and CT Core Standards implementation?</td>
<td>CONFIDENCE</td>
<td>Build public confidence (EC-CON)</td>
</tr>
</tbody>
</table>
6 Describe any changes to the materials (curriculum, textbooks, technology, etc.) that you are using since the implementation of the new standards, and assessments?

CHANGE
Changes were made in materials, practice, and beliefs.
(EC-CHG)

Materials (EC-CHG-MAT)
Instructional Practice (EC-CHG-I)
Beliefs (EC-CHG-B)

7 Describe your instructional practice in preparing students for the Smarter Balanced assessment, compared to the prior assessment, the Connecticut Mastery Test.

CHANGE
Changes were made in materials, practice, and beliefs
(EC-CHG)

Materials (EC-CHG-MAT)
Instructional Practice (EC-CHG-I)
Beliefs (EC-CHG-B)

8 In looking at student assessment data, there was an increase in the Class of 2020 Cohort achievement results. What do you notice about the data results? How did the growth happen?

CHANGE
Changes were made in materials, practice, and beliefs
(EC-CHG)

Materials (EC-CHG-MAT)
Instructional Practice (EC-CHG-I)
Beliefs (EC-CHG-B)

9 Of the professional development you have received which, if any, has had the most meaningful impact on your instruction.

EXPERIENCES
Teachers were provided with mastery and vicarious experiences
(SE-EXP)

Professional Development (SE-EXP-PD)
Workshop (SE-EXP-W)
Training (SE-EXP-TR)
Professional Learning Community (SE-EXP-PLC)

10 How would you describe the culture and climate of your school during the

COMMUNICATION-
School leaders use social persuasion
(SE-COM)

Feedback (SE-COM-F)
Vision (SE-COM-V)
<table>
<thead>
<tr>
<th>Implementation of the new standards, assessment, and evaluation plan?</th>
<th>EMOTION- Teachers did not have an increase in emotional arousal (SE-EMO)</th>
<th>Positive (SE-EMO-POS) Negative (SE-EMO-NEG)</th>
</tr>
</thead>
<tbody>
<tr>
<td>How is preparing for the Smarter Balanced Assessment the same or different than preparing students for the CMT Assessments?</td>
<td>SELECTIVE Teachers with strong self-efficacy provide students with opportunities to master content (SE-SEL)</td>
<td>Activities (SE-SEL-ACT) Assessment (SE-SEL-ASM) Test Prep (SE-SEL-PREP)</td>
</tr>
<tr>
<td>Has your ability and effectiveness to instruct been influenced by the new standards and assessments? If so, how?</td>
<td>ABILITY Teachers with high self-efficacy ability to handle complex tasks and are confident in their ability to instruct (SE-ABL)</td>
<td>Control (SE-ABL-CTL) Content Standards (SE-ABL-STD) Communication (SE-ABL-COM) Instructional Strategies (SE-ABL-I)</td>
</tr>
<tr>
<td>Has your ability to engage, motivate, and support students been influenced by new standards and assessments? If so, how?</td>
<td>MOTIVATION Teachers with high self-efficacy have the ability to engage, motivate, and support students (SE-MOT)</td>
<td>External (SE-MOT-EXT) Internal (SE-MOT-INT) Support (SE-MOT-SUP)</td>
</tr>
</tbody>
</table>

The researcher, through the repeated use of analysis, formed broader categories and the resulting categories began to form a pattern (Creswell, 2012; Saldaña, 2012). Once the data had the initial codes, data was sorted by code, theme, and was examined for patterns. The data was then reanalyzed, to develop categories and subcategories.

In the second cycle, In Vivo coding was used. In Vivo coding takes the participants’ words to develop codes. According to Rubin and Rubin (2012), after an interview the researcher reads the responses, noting a word or phrase for each passage or response that best summarizes the passage. The researcher reexamined quotes and themes that the interviewees emphasized; as
this may provide information not solicited in the research questions. Themes are not only explicit in language through quotes, but may be subtler such as figures of speech (Rubin & Rubin, 2012).

**Limitations**

This case study was conducted in a large suburban public school district in southwestern Connecticut. Historically, the district performed well on state accountability measures, had low incidents of student misconduct. This district is located in a suburban area and less than 10% of students receive Free and/or Reduced Lunch. The context of the district provides limitations to this study. Replication of this study would be suggested for researchers examining teachers in similar districts. Creswell, (2011) maintains that the number of people in a qualitative study may vary from one to another. This case study included four participants in the self-efficacy survey and focus group. The self-efficacy survey in this study was intended to inform the researcher of the self-efficacy of the participants of the focus group. The small focus group size allowed the researcher to provide each participant time to be heard during the interview. Although sample sizes for case studies can range, a larger sample of participants taking the survey and participating in the focus group can improve transferability. Transferability from this study is difficult given the low sample size of the survey and focus group participants. However, Stake (1995) wrote that the nature of case study is particularization, not generalization. He describes case study researchers become knowledgeable about a particular case and how it is unique from the others. The researcher, knowing the limitations of this case study did take steps to increase credibility, transferability, dependability, and confirmability through the maintenance of trustworthiness and triangulation of data.
Trustworthiness

It was the goal of this study to determine the commonalities and patterns in teacher perceptions of change. As preparation for this study, steps were taken to maintain trustworthiness. Trustworthiness is tested by the credibility, the transferability, the dependability, and the confirmability of the study (Lincoln, Guba, & Schwandt, 2007). A rigorous approach to data collection will help to maintain trustworthiness of the data (Creswell, 2012). Each criterion has various techniques to test the extent of the trustworthiness. Credibility was tested to assure the results are believable and are in alignment with reality of what is occurring. Transferability allows the results to be applied to a wider population. Dependability was assured by providing enough information sufficient for another researcher to repeat the study.

Credibility in the findings assures that there is a truthful, accurate, representation of the phenomenon. In this study, triangulation was utilized to assure credibility. Triangulation is the process by which the researcher corroborates data from a variety of individuals, a variety of data types, and methods of collection (Creswell, 2012). A combination of data sources was implemented to triangulate data. Data was triangulated through various data types as well as methods of collection (professional development documentation review, student assessment data review, survey, and focus group interview). By including middle school teachers from various disciplines allows for corroborating evidence from different individuals. To provide a more complete understanding of the teacher perceptions of policy changes, the use of professional development documentation, test result data, survey data, supported, and informed the focus group interview.

The focus group interview findings were shared with the participants. Member checking strengthens trustworthiness and credibility. The process of member checking and triangulation,
increases the credibility of the study (Lincoln et al., 2007). The findings were shared with the participants via email to confirm that the summary of the focus group is accurate, the description is realistic, and the interpretations are fair (Creswell, 2012, p. 259). Peer debriefing was utilized though a peer at the district office who has a doctoral degree. The peer reviewer is an Assistant Superintendent of Curriculum, Instruction, and Assessments who coordinated the curriculum development, test administration, and professional development initiatives in the district. The peer reviewer reviewed the data and conclusions to achieve credibility. The review of the data was performed by an individual outside of the study to the report for strengths and weaknesses (Creswell, 2012; Lincoln et al., 2007).

Trustworthiness through dependability was strengthened using the case study protocol established for data collection (Yin, 2014). To increase the confirmability of the information, the researcher maintained a chain of evidence. The chain of evidence allows an outside observer to trace the evidence from research question to conclusion or from conclusion to research question. The connections between the case study report to the research questions should follow a methodological approach allowing an external observer to trace the steps in either direction (Yin, 2009). The linear logic model provides a process that is explicit and replicable. The use of data analysis to examine evidence for emergent themes and determine outcomes will allow the reader to confirm the adequacy of potential findings.

The transferability of this case study is limited due to the small sample size of the participants. Participants were selected based on demographic data that was collected. In this study, only participants in the focus group were required to take the self-efficacy survey. A limited number of participants in this district volunteered to participate in the study and therefore it limited the number of participants taking the survey and participating in the focus group.
Knowing that the sample size was limited, the researcher took steps to assure the trustworthiness of the findings, however the small sample size and the context of the school may inhibit the transferability of the results in this case to districts and schools that are not similar in nature to the one in the study. Districts similar to the one selected in this study would include public school districts with a history of high performance on state accountability measures, districts with a low percentage of students receiving free/reduced lunch, and districts that have the financial support of the community to support educational initiatives.

**Conclusion**

The confluence of educational initiatives occurring in schools creates a complex environment. The RTTT initiatives of changes to state standards, standards-based assessments, and teacher evaluation directly affect teachers’ daily experiences. Fullan (2007) theorized that lasting educational change in instructional practice exists when there are changes in materials, beliefs, and teaching approaches. Educational changes have been documented to affect teachers’ social-emotional wellbeing, which is related to their self-efficacy beliefs. This qualitative single-case study explored the perceptions of teachers as they experience a multitude of changes.

Through a trustworthy, methodical, qualitative case study, understanding of the perspectives of teachers during policy change can provide insight to future initiatives. “Concrete, context-dependent knowledge” is valuable in the study of human self-understanding (Flyvbjerg, 2006, p. 244). The utilization of case study methodology provides the researcher with the opportunity to examine teacher perceptions of self-efficacy and policy implementation and the context in which the teachers are working.

By examining the methods of professional development implementation, survey data, and the student achievement results, the researcher took steps to frame the perceptions of this small
group of teachers to a broader perspective. The teacher’s voices were documented through a focus group interview of four teachers, allowing the researcher to examine thoughts, feelings, and lived experiences of policy implementation. To develop a greater understanding of how instructional practices have been impacted by federal policy changes, the ensuing chapters of this thesis will uncover the experiences of a group of middle school teachers in a suburban school district in Connecticut during the Race to the Top era.
Chapter 4: Report of Research Findings

This review of policy implementation occurred during the fall of 2017. The study site was two middle schools in a large public school district in southwestern Connecticut. The teachers involved in this study were certified middle school teachers who had been teaching for 10 years or longer in the academic content areas of mathematics, English language arts, and social studies. The reviewer examined the professional development offered to teachers during the 2015-2016 school year, student achievement data since the 2011 and a self-efficacy survey for focus group participants. A purposive sample was used to select the participants in the focus group, who completed a self-efficacy survey, the Teachers Survey of Self-Efficacy (TSES) (Tschannen-Moran & Hoy, 2011). The survey informed the focus group interview and together with other datasets helped obtain the teachers’ perceptions of their instruction and self-efficacy during the implementation of the Race to the Top policy.

This case study about teacher perceptions of instruction and self-efficacy included a theoretical framework comprised of two theories: educational change theory (Fullan, 2007) and self-efficacy theory (Bandura, 1997). The self-efficacy survey (TSES) was developed by Tshannen-Moran and Hoy (2011). The researcher used the two theories as lenses through which all data sets were analyzed. Once IRB approval was obtained, data was collected and analyzed using the principal components of educational change theory and self-efficacy theory.

Student Achievement Data

Achievement data for the district middle schools was collected through EdSight.ct.gov, the public portal for State of Connecticut Department of Education data. School and district scores were not made available for the pilot administration of the Smarter Balanced assessment, which was in spring 2014, at the end of the 2013-2014 school year. The first release of student
achievement data from that test was from its spring 2015 administration, at the end of the 2014-2015 school year. Student achievement on the Smarter Balanced assessment was obtained for the Class of 2021, allowing the researcher to obtain three consecutive years of data, 2014-2015, 2015-2016, and 2016-2017.

In each school year, student achievement data was provided for the English language arts (ELA) test and the mathematics test. The researcher investigated any change in student performance from the Connecticut Mastery Test (CMT) to the Smarter Balanced assessment. During the prior three years of the CMT administrations, over 94 percent of students had earned proficiency in mathematics, reading, and writing (www.cmtreports.com) (Table 10). The Connecticut Mastery Test (CMT) was previously scored on five Levels, Below Basic, Basic, Proficient, Goal, and Advanced.

Table 10.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Year Tested</th>
<th>Number Tested</th>
<th>% At/Above Proficiency Math</th>
<th>% At/Above Goal Math</th>
<th>% At/Above Proficiency Reading</th>
<th>% At/Above Goal Reading</th>
<th>% At/Above Proficiency Writing</th>
<th>% At/Above Goal Writing</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>2011</td>
<td>512</td>
<td>98.4</td>
<td>90</td>
<td>95.8</td>
<td>89.1</td>
<td>94.1</td>
<td>79.4</td>
</tr>
<tr>
<td>7</td>
<td>2011</td>
<td>532</td>
<td>97</td>
<td>84.4</td>
<td>97.1</td>
<td>92.2</td>
<td>96.2</td>
<td>85.4</td>
</tr>
<tr>
<td>8</td>
<td>2011</td>
<td>545</td>
<td>96</td>
<td>85.7</td>
<td>97</td>
<td>94.1</td>
<td>95.8</td>
<td>82.7</td>
</tr>
<tr>
<td>6</td>
<td>2012</td>
<td>523</td>
<td>96.7</td>
<td>87.6</td>
<td>95.8</td>
<td>88.2</td>
<td>95.6</td>
<td>86.7</td>
</tr>
<tr>
<td>7</td>
<td>2012</td>
<td>522</td>
<td>97.5</td>
<td>86.6</td>
<td>98.6</td>
<td>94.4</td>
<td>95.9</td>
<td>88</td>
</tr>
<tr>
<td>8</td>
<td>2012</td>
<td>533</td>
<td>98.5</td>
<td>88.2</td>
<td>98.3</td>
<td>94.7</td>
<td>95.5</td>
<td>84.6</td>
</tr>
<tr>
<td>6</td>
<td>2013</td>
<td>521</td>
<td>95.4</td>
<td>82.3</td>
<td>94.9</td>
<td>88.1</td>
<td>97.1</td>
<td>87.1</td>
</tr>
<tr>
<td>7</td>
<td>2013</td>
<td>535</td>
<td>95.1</td>
<td>83.7</td>
<td>97.4</td>
<td>94</td>
<td>95.5</td>
<td>83.2</td>
</tr>
<tr>
<td>8</td>
<td>2013</td>
<td>518</td>
<td>96.9</td>
<td>86.9</td>
<td>98.6</td>
<td>95.1</td>
<td>95.2</td>
<td>87.4</td>
</tr>
</tbody>
</table>
In the three previously administered Connecticut Mastery Tests (CMTs), from 2011-2013, over 94 percent of students had earned proficiency and at least 79.4 percent of students earned Goal or above in mathematics, reading, and writing. There is no direct alignment between the CMT levels and the Smarter Balanced levels due to the differences in the two tests.

Student achievement on the Smarter Balanced- Mathematics and Smarter Balanced – ELA is indicated through the identification of an achievement level. Achievement Levels are set according a numeric score range. The Achievement Levels represent “approximations of levels at which students demonstrate mastery of a set of concepts and skills” (Connecticut State Department of Education, 2017, p. 11). Scores are set by achievement levels 1, 2, 3, and 4. Level 1 is identified as “Does not meet the Achievement Standard”; students at this level require substantial improvement toward mastery of either English language arts or mathematics. Students in Level 2 are “Approaching the Achievement Standard” and have nearly met the achievement standard yet require further development toward mastery. Level 3 indicates that the student “Meets the Achievement Standard”, where the student met the standard and are demonstrating progress toward mastery. When a student reaches Level 4 he/she “Exceeds the Achievement Standard”, in exceeding the achievement standard the student demonstrated advanced progress toward mastery. For the first analysis, the researcher displayed the percentages of student achieving at Levels 3 and 4. These levels indicate the students have met or exceeded the achievement standards.

District data was examined for the 2 years following the first administration for the Class of 2021 cohort of students in 2015 (Table11 and Figure 5). The student achievement data examined was for the same cohort of students over the course of three years. By examining the same group of students provided the researcher with a consistent variable in the data set.
Table 11

*Smarter Balanced Student Achievement Results for the Class of 2021 meeting/exceeding achievement standard (Level 3 and 4)*

<table>
<thead>
<tr>
<th>Year</th>
<th>Grade level when tested</th>
<th>ELA/literacy</th>
<th>mathematics</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014-2015</td>
<td>Grade 6</td>
<td>64.6%</td>
<td>59%</td>
</tr>
<tr>
<td>2015-2016</td>
<td>Grade 7</td>
<td>80.8%</td>
<td>74.7%</td>
</tr>
<tr>
<td>2016-2017</td>
<td>Grade 8</td>
<td>83.1%</td>
<td>74.2%</td>
</tr>
</tbody>
</table>

**Figure 5.** Class of 2021 Smarter Balanced results from 2014-2017

The first Smarter Balanced ELA (SB-ELA) test administration for the 2014-2015 school year resulted in 64.6% of students meeting achievement standards (Level 3) or exceeding achievement standards (Level 4) that year. Among the students taking the Smarter Balanced mathematics test, 59% earned Level 3 or Level 4. Initial data analysis revealed that achievement data increased significantly from 2015 to 2016. The proportion of students meeting or exceeding standards grew from 64.6% to 80.8% in ELA and 59% to 74.7% in mathematics. The most significant growth occurred between the 2014-2015 and 2015-2016 school years. Student
achievement in ELA rose slightly (by 0.5%) to 81.3%, while achievement declined slightly (by 0.5%) in mathematics in the 2016-2017 school year. As shown in Table 10 and on Figure 5, the school district showed a 16.2 percentage point increase on the ELA test and 15 percentage point increase on the mathematics test from 2015 to 2016.

To determine whether the increase in 2015-2016 was consistent with similar districts or whether the change was specific to the district being studied, the percentage point change for the school district was compared to the percentage point change to similar districts. Of the 20 districts in the District Reference Group (DRG), the district’s percentage point increase was the highest, with the next-largest increase on the ELA test being 8.5 percentage points. The increase in this district was also the fourth highest increase in the state. The percentage point increase for mathematics was also the highest in the DRG, with the next highest increase being 12.9 percentage points. Since the significant increase in test scores from 2014 to 2015 was not seen in similar districts, there may have been an instructional shift in the district being studied. The absence of any drop-off from 2015-2016 to 2016-2017 suggests that any changes implemented that affect student achievement were effective in maintaining this higher level of achievement the following school year.

Since the significant increase was specific to this district, the student achievement data was further analyzed in greater detail. The researcher examined the distribution of student achievement across all levels in ELA (Figure 6) and mathematics (Figure 7). The number of students in the Class of 2021 cohort taking the assessments had increased with 502 students in Grade 6 taking the 2014-2015 assessments, 530 students in Grade 7 taking the 2015-2016 assessments, and 534 students in Grade 8 taking the 2016-2017 assessments. Given the numbers
of students taking the assessment increased, the increases in students reaching various levels are of increased quantity as well.

**Figure 6.** Class of 2021 Smarter Balanced ELA/literacy results 2014-2017

In 2014, 10.6% of students did not meet the achievement standard, earning a score of Level 1 in ELA, and 24.8% of students earned a Level 2, which meant they were approaching the
achievement standard (Figure 6). Over 35% of students in this district were below grade level standards. In 2015, the percentage of students earning Level 1 on the ELA test decreased to 5.7%; this decreased again in 2016, to 4.7%. Students earning level 2 on the ELA test decreased to 13.6% in 2016; this slightly increased in 2017, to 14%. This slight increase in the 2016-2017 school year was due to more students moving from Level 1 to Level 2. In mathematics, the most consistent growth was shown for students earning Level 4 as they moved from year to year (Figure 7). The percentage of students earning Level 1 decreased from 12.7% in 2015 to 8.8% in 2017. The percentage of students earning Level 2 decreased from 28.3% in 2015 to 17.0% in 2017. The percentage of students earning level 4 increased from 30.3% in 2015 to 49.7% in 2017.

Students in this district showed improvement at all levels. Teachers were able to support student growth not just for the students on the “bubble,” shifting them from Level 2 to Level 3, but for students at all levels. From the 2014-2015 to 2015-2016 school years, not only did more students earn Level 3 and Level 4, more students earned Level 2 (approaching the achievement standard) than earned Level 1 (does not meet the achievement standard) on the ELA test. In mathematics, students consistently earned more Level 4 scores. If the instructional shifts focused solely on test preparation or on improving a small group of select students, growth would not have been seen at each achievement level. Additionally, whatever shifts in instruction occurred, the changes allowed teachers to move the students forward in the second year, with the results being stable and, in some cases, increasing.

Next, the researcher investigated what types of growth occurred in student achievement. To do this, the test scores needed to be examined in raw values, as opposed to aligned achievement levels. Scaled scores are determined by the total number of points, statistically
adjusted to allow for fair comparisons from year to year. This is a more precise measure than achievement levels. Scaled scores are broken into ranges assigned to grade levels and achievement levels. The overall scaled score has values increasing as the grade level increases. The scaled score and level assignment is determined each year within a 2000 to 3000 range by the Smarter Balanced Consortium (Table 12).

Table 12

*Smarter Balanced Achievement Levels and Score Ranges, Class of 2021 Cohort*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade 6</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 4</td>
<td>2610-2748</td>
<td>2635-2778</td>
<td>2653-2802</td>
</tr>
<tr>
<td>Level 3</td>
<td>2552-2609</td>
<td>2567-2634</td>
<td>2586-2652</td>
</tr>
<tr>
<td>Level 2</td>
<td>2473-2551</td>
<td>2484-2556</td>
<td>2504-2585</td>
</tr>
<tr>
<td>Level 1</td>
<td>2235-2472</td>
<td>2250-2483</td>
<td>2265-2503</td>
</tr>
<tr>
<td>Content Area: ELA/Literacy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Level 4</td>
<td>2618-2724</td>
<td>2649-2745</td>
<td>2668-2769</td>
</tr>
<tr>
<td>Level 3</td>
<td>2531-2617</td>
<td>2552-2648</td>
<td>2567-2667</td>
</tr>
<tr>
<td>Level 2</td>
<td>2457-2530</td>
<td>2479-2551</td>
<td>2487-2566</td>
</tr>
<tr>
<td>Level 1</td>
<td>2210-2456</td>
<td>2258-2478</td>
<td>2288-2486</td>
</tr>
</tbody>
</table>

When examining student, school, or district growth, the scaled scores inform the examiner of any mean change in the data set. According to the CSDE, the continuous vertical scale scores can be used to show the students’ current achievement level and growth over time. The aggregation of the scores describes the district changes in performance on tests. The district average vertical scaled scores for the class of 2021 cohort were examined over the 3-year period (Figure 8).
Figure 8. Class of 2021 Smarter Balanced Scaled Scores from 2014 to 2017.

In the first year, the average scaled scores were 2558 in ELA and 2566 in mathematics. The second administration resulted in a district average scaled score of 2622 in ELA and 2614 in mathematics. For the average student that would not represent a change in achievement level, because 2558 corresponds to Level 3 for Grade 6 and 2622 is Level 3 for Grade 7. In the 2016-2017 administration, scores in ELA and mathematics increased again, to 2638 and 2647, respectively. Therefore the district average scaled score revealed an increase in the mean score each year for 3 years. When the scaled scores were aligned to the Smarter Balanced achievement levels, the average vertical scaled score remained in Level 3. By examining the specific district vertical scaled scores, there was a documented improvement of the class of 2021 cohort as they moved from Grade 6 through to Grade 8. Students showed growth in both the ELA and mathematics tests over the course of 2 years.

Since changing to the Smarter Balanced Assessment in 2014-2015, student proficiency has almost reached the previous CMT goal percentage levels, with the highest score being 83.1% in ELA. The initial assessment of the Smarter Balanced assessment had 64% of students
achieving proficiency. The district was able to show growth from the 2015 to the 2016 administrations, increasing student achievement. Analysis of the student achievement data suggests that the new Smarter Balanced assessment was a change for the teachers and that the new assessment content may have been more complex than the previously administered CMT. The student achievement data led the researcher to inquire about the instructional shifts that took place during the 2015-2016 school year. Through comparison to similar districts, the researcher found that there were changes to student achievement on the Smarter Balanced assessment were not consistent with similar districts. This change also led the researcher to examine the instructional practices in the district.

The changes in student achievement for this cohort of students suggest to the researcher that the changes may be influenced by changes made by teachers and the content that was delivered. The research questions in this case study examined teachers’ changes to their instruction during this time period. The researcher suggests the increase in student achievement was related to how the district personnel adjusted to the new assessment after the first administration. Staff and students were able to sustain whatever adjustments were made.

Knowing that the 2015-2016 school year saw an increase in student achievement, the professional learning during that school year will be the focus of an additional data set. The researcher also wanted to examine whether the changes to student achievement were related to more test preparation or deeper changes to instructional practice and content. To examine the types of changes that were made to teacher practice, an examination of the professional development that was provided to the staff was examined through a document review and a focus group interview. Both of these data sets will be reviewed in the following sections.
Professional Development Document Review

**PD document review data.** Results from the first full administration of the Smarter Balanced assessment were received during the summer of 2015. In response to these results, the district changed its delivery of professional development (PD). In the fall of 2015, professional development was delivered to the staffs of both middle schools. This PD was delivered in a joint session of both middle schools staff together. Once IRB approval was obtained, the researcher met with school district administrators to obtain documentation, which included PowerPoint presentations given in November 2015, December 2015, and February 2016. The researcher reviewed the documents shared during combined-school professional development during the 2015-2016 school year.

The November 2015 PD session presented to all middle school teachers included a non-subject-specific reading sample. The session consisted of teachers engaging with a complex text and discussing what makes a text complex, linking the discussion to the Connecticut Core Standards. Teachers had to closely read the document and participate in peer-to-peer discourse, followed by a whole-group discussion. Teachers then had to reflect on the reading activity and consider how to implement a similar reading activity for their students. After this instructional component of the session, teachers as part of their grade-level teams had to consider how to implement the standards into each unit and develop a plan for incorporating the standards into their next unit of study.

During the next month, district administrators participated in classroom walkthroughs. In December 2015, an additional combined-school PD took place. The emphasis of this session was to develop student engagement using close reading and student discourse strategies. During this session, teachers also were able to apply the new learning to an upcoming unit of study that
would be taught in January. While in this session, teachers participated in active reading of an article regarding mentor texts and discussed the reading. A separate PD session was held in December for Grade 8 ELA teachers who were engaging in classroom walkthroughs at the high school to observe evidence of student engagement, followed by the similar activity of planning for a January unit of study.

The February PD shifted the focus from instructional strategies embedding the CCSS to considering the Smarter Balanced assessment. Smarter Balanced multiple choice questions, development of writing skills for the SB performance task, and the examination of scoring guides were used to provide a common foundation for all teachers in the elements of the new assessment. ELA teachers received specific instruction regarding elements of the writing strand that would be on the test, including argumentative, informative/explanatory, and narrative writing styles. Teachers actively participated in this PD as they practiced scoring student responses.

Professional development was provided for mathematics teachers in addition to the whole group literacy instruction in November 2015. Although mathematics does require literacy skills mathematics teachers received professional learning specific to the math content and standards. Mathematics teachers were provided with focused instruction on the mathematical workshop model for instruction. The teachers were provided with an article to read, “Mathematics Workshop: Mathematics Class Becomes Learner Centered” (Heuser, 2000). The focus of the mathematics department work was a discussion on how to create a student-centered, engaging learning environment. Teachers were provided with support on embedding the workshop model into future units of study.
From November 2015 through March 2016, teachers in all departments also had the opportunity to engage in one 3-4 hour session with departmental grade level teams. These sessions were called, “cadre time”. During “cadre time”, teachers work in grade level department teams for a concentrated period of time. The teachers would receive substitute coverage for their classes. During the cadre, teacher groups would build on the work done during the PD sessions, with a specific focus on instructional advancement and planning for classroom implementation.

The professional development documents from the 2015-2016 school year were reviewed, coded, and analyzed. For the first cycle of coding the researcher utilized predetermined codes to code the professional development documents using a structural coding method (Table 13). Codes were predetermined based on expected themes and were aligned to the theoretical framework. Codes that begin with EC are related to components of educational change, whereas codes with SE relate to self-efficacy. In the first cycle of coding, structural coding was used. This allowed the researcher to code relative to a specific research question related to the theoretical framework. In the second cycle of coding, descriptive coding was used. Documents were reexamined in this cycle for themes common across the documents.
Table 13

*Codes Utilized in Professional Development Document Analysis*

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC-ACC-SB</td>
<td>Accountability-Smarter Balanced Assessment</td>
</tr>
<tr>
<td>EC-ACC-STD</td>
<td>Accountability – Standards</td>
</tr>
<tr>
<td>EC-CAP-ASM</td>
<td>Capacity - Assessment</td>
</tr>
<tr>
<td>EC-CAP-DIS</td>
<td>Capacity - Discourse</td>
</tr>
<tr>
<td>EC-CAP-INST</td>
<td>Capacity - Instruction</td>
</tr>
<tr>
<td>EC-CAP-MAT</td>
<td>Capacity - Selection of materials</td>
</tr>
<tr>
<td>EC-CAP-RW</td>
<td>Capacity - Reading/writing</td>
</tr>
<tr>
<td>EC-CAP-SB</td>
<td>Capacity - Smarter Balanced assessment</td>
</tr>
<tr>
<td>EC-CAP-STD</td>
<td>Capacity - Standards</td>
</tr>
<tr>
<td>EC-CHG-I</td>
<td>Change - Instruction</td>
</tr>
<tr>
<td>EC-INC-PART</td>
<td>Inclusion - Participants</td>
</tr>
<tr>
<td>SE-ABL</td>
<td>Ability</td>
</tr>
<tr>
<td>SE-COM-CHG</td>
<td>Communication - Changes</td>
</tr>
<tr>
<td>SE-COM-FB</td>
<td>Communication - Feedback</td>
</tr>
<tr>
<td>SE-COM-VIS</td>
<td>Communication - Vision</td>
</tr>
<tr>
<td>SE-EXP-PD</td>
<td>Experiences - PD</td>
</tr>
<tr>
<td>SE-MOT</td>
<td>Motivation</td>
</tr>
</tbody>
</table>

Codes were re-examined and combined to represent the data. Frequencies for each code tabulated from the first cycle of coding are presented in Table 14. Codes that started with EC were coded relative to the first research question relative to educational change and codes with SE were relative to the second research question regarding self-efficacy.
Table 14

Professional Development Document Frequency of Codes First Cycle

<table>
<thead>
<tr>
<th>Code</th>
<th>Descriptor</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC-ACC-SB</td>
<td>Accountability - Smarter Balanced Assessment</td>
<td>6</td>
</tr>
<tr>
<td>EC-ACC-STD</td>
<td>Accountability – Standards</td>
<td>4</td>
</tr>
<tr>
<td>EC-CAP-ASM</td>
<td>Capacity - Assessment</td>
<td>3</td>
</tr>
<tr>
<td>EC-CAP-DIS</td>
<td>Capacity - Discourse</td>
<td>4</td>
</tr>
<tr>
<td>EC-CAP-INST</td>
<td>Capacity- Instruction</td>
<td>10</td>
</tr>
<tr>
<td>EC-CAP-MAT</td>
<td>Capacity - Selection of materials</td>
<td>7</td>
</tr>
<tr>
<td>EC-CAP-RW</td>
<td>Capacity - Reading/writing</td>
<td>10</td>
</tr>
<tr>
<td>EC-CAP-SB</td>
<td>Capacity - Smarter Balanced assessment</td>
<td>5</td>
</tr>
<tr>
<td>EC-CAP-STD</td>
<td>Capacity - Standards</td>
<td>4</td>
</tr>
<tr>
<td>EC-CHG-I</td>
<td>Change - Instruction</td>
<td>2</td>
</tr>
<tr>
<td>EC-INC-PART</td>
<td>Inclusion - Participants</td>
<td>10</td>
</tr>
<tr>
<td>SE-ABL</td>
<td>Ability</td>
<td>3</td>
</tr>
<tr>
<td>SE-COM-CHG</td>
<td>Communication - Changes</td>
<td>2</td>
</tr>
<tr>
<td>SE-COM-FB</td>
<td>Communication - Feedback</td>
<td>9</td>
</tr>
<tr>
<td>SE-COM-VIS</td>
<td>Communication - Vision</td>
<td>6</td>
</tr>
<tr>
<td>SE-EXP-PD</td>
<td>Experiences - PD</td>
<td>6</td>
</tr>
<tr>
<td>SE-MOT</td>
<td>Motivation</td>
<td>2</td>
</tr>
</tbody>
</table>

In the table above, the researcher determined that the majority of the professional development documents were related to educational change. Specifically the components of educational change theory that involved building internal capacity (CAP). In each professional development session there were opportunities for teachers to develop their content capacity and instructional strategies. For example, there was consistent instruction to the teachers on reading and writing. Mathematics teachers were provided with additional support in their content area, and all teachers received support in the area of literacy. In coding the documents, capacity was developed in various ways. Teachers were shown how to select materials based on Lexile level and given direction on which Lexile levels would be appropriate for their students. Smarter Balanced assessment questions were reviewed with the staff, as a way to demonstrate the skills students would need in reading, writing, and mathematics. Each professional development
session was tied to the appropriate CT Core Standard, showing teachers the alignment of the work they are engaging in with the standards set by the state (EC-CAP-STD).

Instructional rounds were performed by the administrative team and also by select groups of ELA and Mathematics teachers. The observations from the instructional rounds were then shared during the December 2015 professional development session. Sharing of these observations was a way to provide feedback to teachers on what the district is valuing. By highlighting best practices, it is a way to develop the capacity of teachers. Observations included that the curriculum taught was tied to CT core standards, formative and summative assessment questions were tied to curriculum, students were encouraged by their teachers to solicit feedback on their classwork, and students were working and talking together. Based on those observations, the PD session included ways for teachers to learn more about the highlighted items in the observations. Teachers were given time to develop a future unit of study that included a focus on curriculum, instruction, and assessment.

In addition to the standards aligned content, the sessions were delivered using instructional strategies that the teachers could then embed in their own classrooms. Capacity development included developing instructional capacity. For example, teachers were asked to read a selection, annotate their reading, and then share with a peer prior to sharing with the group. As a way to develop peer to peer discourse, teachers were asked to do a two-column writing activity where a teacher would place his/her questions (as if they were a student) on the left column, and peer dialogue notes in the right column, below the two columns, the teacher would synthesize the information. At the end of the activity there was a slide that asked to reflect on the day’s activities and its implications on their own teaching. This allowed teachers to think about the changes they would make to their own instruction.
There were components of the professional development documents that supported teacher self-efficacy. The codes that emerged were relative to how school leaders were communicating with teachers. In each document, the district goal was stated, providing a framework for teachers of where they should be focusing their attention. Teachers were given time during the professional development sessions to discuss how they would embed the new learning in a future unit of study. While this is a means of providing teachers with the time to plan, it also communicated to the teachers that the expectation is they will be embedding this work into a future lesson. This form of social persuasion also maintains and supports teacher self-efficacy. The format of the professional learning modeled for teachers the practices that were desired by the district leadership. Teachers are not told exactly what to teach in an upcoming unit, but the expectation is that they will be embedding the skills learned during the PD session in their classroom.

A second cycle was then administered to examine the data for patterns and themes. In the second cycle of coding, nouns or phrases were used to identify themes emerged across all presentations. The codes were re-examined for frequency. As the codes were analyzed, patterns and themes emerged. The original code, second cycle codes, and thematic reduction of codes are presented in Table 15 with the frequency of the themes.
Table 15

*Thematic Reduction of Codes in Professional Development Documents*

<table>
<thead>
<tr>
<th>Original code</th>
<th>Second cycle code</th>
<th>Theme</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC-CAP-ASM</td>
<td>Capacity</td>
<td>Develop internal capacity</td>
<td>43</td>
</tr>
<tr>
<td>EC-CAP-DIS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC-CAP-INST</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC-CAP-MAT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC-CAP-RW</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC-CAP-SB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC-CAP-STD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE-EXP-PD</td>
<td>Teacher Experiences</td>
<td>Professional development supported teacher self-efficacy</td>
<td>23</td>
</tr>
<tr>
<td>EC-INC-PART</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC-CHG-I</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE-ABL</td>
<td>Teacher Efficacy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE-MOT</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE-COM-CHG</td>
<td>Communication</td>
<td>School leaders used social persuasion</td>
<td>17</td>
</tr>
<tr>
<td>SE-COM-FB</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SE-COM-VIS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC-ACC-SB</td>
<td>Accountability Measures</td>
<td>Professional development included a focus on state standards and standards based assessment</td>
<td>10</td>
</tr>
<tr>
<td>EC-ACC-STD</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Based on the frequency of the codes, the consistent themes were: *develop internal capacity*, *professional development supported teacher self-efficacy*, *school leaders used social persuasion*, *professional development included a focus on state standards and standards based assessment*. Each of these themes will be examined in the following section.

**Develop internal capacity.** The theme with the highest frequency was *developing internal capacity*. When examined by the codes that contributed to the theme, the various areas that were developed through PD primarily focused on instructional strategies, such as reading/writing, discourse, and instruction. Professional development sessions focused on building teacher capacity in literacy. During the sessions, teachers were given specific instruction in reading and writing, including how to select materials with appropriate text complexity. Each session had all middle school teachers reading a complex text and responding
with both written and oral communication. The emphasis on literacy instruction was delivered to all staff. While teachers were developing capacity in literacy instruction, they were also learning about the relationships of the CT Core Standards to instruction and to the standards-based assessment.

**Professional development supported teacher self-efficacy.** The teachers were provided instructional strategies as these were modeled for them and also through planned activities that focused on instructional best practices. At the combined-school PD in December 2015, teachers were asked to engage in active reading of a document. After reading the documents, teachers used active note taking to annotate their own questions, wrote answers for their peers, and engaged in peer-to-peer discourse to synthesize the information. This PD session used the practice of putting the teachers in the students’ shoes, thereby allowing teachers to participate in professional learning through activities that were transferrable to their classrooms. Giving teachers time to develop their skills in both content and instructional practice by practicing and modeling their instruction, provides a vicarious experience that further develops self-efficacy. The sessions also included professional learning for teachers in formative assessment, discourse, and how to select appropriate materials. Badura (1997) describes that modeling provides teachers a vicarious experience and is an effective way to develop self-efficacy. In the professional development sessions, teachers were given direct instruction on how to determine the Lexile level. Immediately, a teacher would be able to utilize this instructional strategy in his or her classroom with.

Every department had an opportunity to have one half-day cadre session. At these department focus sessions, teachers engaged in work that focused on departmental goals aligned with the district goal. The cadre days were used in different ways by each department. Having
teachers actively participate in the professional learning allowed them to develop self-efficacy. During the cadre time, teacher leaders planned and led the sessions. This served for teachers to see their colleagues having influence and input into the collaboration time, allowing for vicarious experiences that were not a top-down mandate. For example, the grade six mathematics teachers used their cadre time to discuss how to implement the math workshop instructional strategy led by the math instructional leaders. In the World Language department, staff collaboratively focused on how students can generate their own questions as they read more challenging texts. Providing staff with time to collaborate on instructional strategies included them in the change process and supported their self-efficacy during the implementation of policy changes.

In addition to the cadre days, some staff members in ELA and mathematics had the opportunity to engage in instructional rounds. Emails regarding the instructional rounds were shared with the researcher, explaining the agenda for each session. In November 2015, a group of nine mathematics teachers from both middle schools visited the district high school to engage in instructional rounds. The middle school teachers actively observed the high school lessons for student engagement. This practice was repeated with a selection of middle school ELA teachers in December 2015. Teachers had time to debrief after each instructional round to discuss instructional strategies that he or she may try to implement in their own classroom. Since not all teachers were able to engage in visits to the high school for observations, the December 2015 professional development session included a video for all staff to watch. The online video was a demonstration of an ELA class. Teachers watched the video with the plan of engaging in a discussion regarding what the students were reading, writing, and speaking about in the video and what implications it may have on one's own instructional practice. Providing teachers an opportunity to observe colleagues implement instructional practices was in alignment with the
best practices for developing teacher self-efficacy.

*School leaders used social persuasion.* There were many ways the school leaders communicated with the teachers: through communication of the district goal and vision, communicating the change process, and soliciting and providing feedback to teachers. These communications created a culture in which expectations were shared, which is a form of social persuasion. The district goal was stated clearly at the beginning of each presentation and mentioned in subsequent slides. In the September 2015 Professional Development document, the goal was clearly stated on the second slide, “to strengthen student achievement with an emphasis on critical/creative thinking and communication skills for all learners, particularly in the area of writing across the curriculum this included a focus on strengthening the “alignment of curriculum and instruction to the Connecticut Core standards” (September 2015 Professional Development document, Slide 2). The focus of the initial PD session further clarified on the third slide of the document was to develop a “shared understanding of key instructional and assessment practices which were necessitated by the Connecticut Core Standards, Smarter Balanced testing, and best practices in teaching and learning.” (September 2015 Professional Development document, Slide 3). Each presentation clearly identified the purpose of the session. During subsequent presentations, the prior session’s objective was identified, providing teachers with clarity about the purpose and alignment of each session. At the end of each session, teachers were asked to provide feedback and to reflect on their learning from that day’s session. This allowed the administration to develop future sessions based on the teacher feedback.

*Professional development included a focus on state standards and standards based assessment.* The administration also clearly communicated the accountability measures and their expectations with regard to these. There were frequent references to the Connecticut Core
Standards and the Smarter Balanced assessment throughout the sessions. By directly referring to the CT Core Standards and the Smarter Balanced assessment, the school leadership made it clear to the teachers that the standards and assessment were valued and were a driving force behind the activities they were engaging in. In two of the professional development sessions, teachers were provided with sample questions and rubrics for the Smarter Balanced assessment.

The researcher was seeking to answer the question: How do teachers perceive their instructional practices have been impacted since the implementation of the RTTT curriculum and assessment initiatives? After a thorough review of the professional development documents, it was clear that all teachers were provided with opportunities for in-depth development of their own reading and writing skills, which could then be used while instructing their students. Teachers were provided with activities that allowed them to practice instructional strategies with colleagues and to identify how they would implement these skills in future lessons. The researcher notes that the professional development sessions included teachers of all disciplines in literacy instruction. This was in line with the communicated district goal to develop writing across the curriculum. It was clear that there was a district-wide emphasis on developing reading and writing skills that were aligned to the CT Core Standards and that this emphasis was communicated to the teachers in both schools equally. Based on the analysis of the data set, the themes develop internal capacity, professional development supported teacher self-efficacy, school leaders used social persuasion, professional development included a focus on state standards and standards based assessment were determined and the results of this analysis was used to inform the other data sets. During the professional development sessions, teachers were provided with supportive, inclusive professional learning opportunities which, when aligned to the theoretical framework, suggest a successful implementation of the educational changes
around standards and assessment with consideration and support for teacher self-efficacy.

**Self-efficacy Survey**

The participants experienced professional learning opportunities in which they participated in the learning process. The professional development modeled some instructional methods the teachers should implement in the curriculum. These experiential opportunities may have mitigated feelings of self-doubt and anxiety. Using this data set to inform the focus group allowed the researcher to consider the teachers’ own perceived strengths and weaknesses. It also allowed the researcher to consider the group dynamics of the focus group, allowing all participants to be heard: because of the variation in self-efficacy, there would be variations in their confidence to contribute to the conversation.

**Participants.** An email was sent out to all middle school teachers in certain academic areas (mathematics, English Language Arts, science, and social studies) in the district. The email solicitation explained the study and asked for volunteers. Once a teacher volunteered, he or she was sent a survey that contained the consent statements. Participants had to consent in order to proceed to the Teachers Self-Efficacy Survey (TSES). Four volunteers requested to participate in the focus group based on the results of the demographic information. The four volunteers were given the self-efficacy survey. All focus group participants were experienced, certified educators who had taught since the 2012-2013 school year. The participant information (participants are protected by pseudonyms) collected in the demographic survey is provided in Table 16. The teachers were currently all in the same school, with one teacher was previously assigned to the other middle school.
Table 16

**Participant Information**

<table>
<thead>
<tr>
<th>Teacher</th>
<th>Current assignment</th>
<th>Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant 1</td>
<td>Social studies</td>
<td>25 years</td>
</tr>
<tr>
<td>Participant 2</td>
<td>English language arts</td>
<td>10 years</td>
</tr>
<tr>
<td>Participant 3</td>
<td>Social studies</td>
<td>12 years</td>
</tr>
<tr>
<td>Participant 4</td>
<td>Mathematics</td>
<td>21 years</td>
</tr>
</tbody>
</table>

**Self-efficacy survey data.** Prior to the focus group, all participants were asked to complete the long-form Teachers Self-Efficacy Scale (TSES) developed by Tschannen-Moran and Hoy (2011). Permission was acquired through the website of Dr. Tschannen-Moran [http://wmpeople.wm.edu/site/page/mxtsch/researchtools](http://wmpeople.wm.edu/site/page/mxtsch/researchtools) and permission was confirmed via an email to Dr. Tschannen-Moran. (This data provided insight into each participant’s beliefs in her or his abilities. Within the TSES data, subscale score are calculated for three self-efficacy factors: efficacy in student engagement, efficacy in instructional practices, and efficacy in classroom management. Tschannen-Moran and Woolfolk Hoy (2001) have identified reliabilities for the total TSES score and the three efficacy factors identified. The reported unweighted mean from Tschannen-Moran and Woolfolk Hoy (2001) score for engagement is 7.3 with a standard deviation (SD) of 0.94, the mean for instruction is 7.3 with an SD of 1.1, the mean for management is 6.7 with an SD of 1.1, and the mean for TSES is 7.1 with an SD of 0.94. Using the published mean and standard deviation values from Tschannen-Moran and Woolfolk Hoy (2001), the researcher analyzed the participants’ results to determine the mean TSES and efficacy subscore values. Participant TSES and self-efficacy subscale mean values are listed in Table 17.
Table 17

*Participant TSES and Efficacy Subscore Mean Values*

<table>
<thead>
<tr>
<th>Teacher</th>
<th>TSES</th>
<th>Efficacy in student engagement (MOT)</th>
<th>Efficacy in instructional practices (SEL)</th>
<th>Efficacy in classroom management (ABL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant 1</td>
<td>8.4++</td>
<td>7.8+</td>
<td>8.4*</td>
<td>8.9+</td>
</tr>
<tr>
<td>Participant 2</td>
<td>6.3-</td>
<td>6.3-</td>
<td>6.0*</td>
<td>6.4-</td>
</tr>
<tr>
<td>Participant 3</td>
<td>6.9-</td>
<td>6.0*</td>
<td>6.4-</td>
<td>8.1+</td>
</tr>
<tr>
<td>Participant 4</td>
<td>7.2+</td>
<td>6.9-</td>
<td>7.3+</td>
<td>7.1+</td>
</tr>
</tbody>
</table>

*Note.*  
+ = score is at or above mean, ++ greater than 1SD above mean.  
- = score is below mean. * = greater than 1 SD below mean.

In examination of participant TSES scores, two of the participants had scores at or above the mean. Upon closer examination, Participant 1 had a score greater than 1 standard deviation above the mean, suggesting high self-efficacy. The remaining three participants had scores within one standard deviation of the mean, suggesting these participants had moderate self-efficacy. Although these scores are within one standard deviation the mean, a deeper look at their subscore would indicate the areas in which the teachers may have high or low self-efficacy. The initial analysis led the researcher to examine the results for each participant as well as comparative results for each subgroup.

*Participant self-efficacy scores.* The TSES data was analyzed for each participant. In Figure 9, the researcher displays the self-efficacy score and subscores for Participant 1. Participant 1 scored an 8.4 overall for the TSES, with a 7.8 mean score in Student Engagement, 8.4 in Instructional Practices and 8.9 in Classroom Management.
Participant 1 had the highest scores overall and in each subgroup; with all scores above the mean score (Figure 9). This indicated that Participant 1 had the highest self-efficacy; she also had self-efficacy survey scores above the mean on each subgroup. High self-efficacy scores would be expressed through higher confidence in her ability to implement changes, greater resistance to changes, and a lessened emotional response to changes.

This process was repeated for each participant. The researcher examined the self-efficacy and subgroup scores for Participant 2 (Figure 10). Participant 2 scored a 6.2 overall TSES, a 6.3 in Student Engagement, 6.0 in Instructional Practices, and 6.4 in Classroom Management.

*Figure 9. Participant 1 self-efficacy scores*
Participant 2 self-efficacy scores

Participant 2 had the lowest mean score, yet still was within one standard deviation of the mean. This suggests that although the teacher has the lowest mean score, his score was not statistically significant. In looking at his subscores, the subscore on instructional practices was more than one standard deviation below the mean. Participant 2 has low self-efficacy in his instructional practices. This may be manifested in him having lower confidence in implementing instructional changes, greater emotional response to the changes, and greater anxiety about the change process.

The self-efficacy score and subscores for Participant 3 was the third participant examined (Figure 11). This participant scored a 6.9 on the TSES 6.0 in Student Engagement, 6.4 in Instructional Practices, and 8.1 in Classroom Management.
Figure 11. Participant 3 self-efficacy

The third participant had a self-efficacy score below the mean, yet within one standard deviation of the mean. The subscore for self-efficacy in student engagement was more than one standard deviation below the mean. This may be expressed in this participant having lower confidence in his ability to create engaging lessons or sustain student engagement in the topics. Since this teacher had lower self-efficacy than his peers, he, like Participant 2, may have a greater emotional response than his colleagues to the policy changes. This teacher had high self-efficacy in classroom management and a low score in student engagement, which implies that he may feel confident in controlling his classroom, but may struggle with implementing the nuances of a rigorous curriculum. He had self-reported lower scores in engaging difficult students and motivating students. This teacher may feel frustrated with the new curriculum and assessment as he may not have the self-efficacy skills to adapt to the mandates.

Lastly, Participant 4’s self-efficacy and subgroup scores were examined (Figure 12). Participant 4 scored a 7.2 on the TSES with a 6.9 in Student Engagement, 7.3 in Instructional Practices and 7.1 in Classroom Management.
Participant 4 self-efficacy

Participant 4 had an overall self-efficacy score above the mean. The teacher had self-efficacy in instructional practices and classroom management that were above the mean. The student engagement subscore was below the mean. This suggests the teacher was able to implement instructional strategies and content but may struggle with motivating students. Upon examination of the participant’s question responses, this participant had reported low scores with regard to improving the understanding of a failing student, motivating students who show low interest in work, and instructional strategies related to differentiating instruction. This teacher may struggle with finding ways to motivate students.

**Self-efficacy subgroup scores.** The analysis of the participant’s individual scores on the subgroups led the researcher to compare the subgroup scores. Self-efficacy scores were compared and analyzed by participant for each subgroup (Figure 13).
Figure 13. Participant comparison by subscore

Through the examination of each subgroup, the researcher aimed to understand how the participants viewed themselves and also how the participants responded as a whole. This allows the researcher to develop an understanding of the participants’ self-efficacy prior to meeting in a focus group. The understanding that the researcher developed of the participants helped to provide context to the teachers’ responses to the focus group questions.

When examined holistically, self-efficacy in classroom management is strong for each participant, as it had the highest or second-highest mean subscore values. This suggests that the teachers believed they had the ability to handle complex tasks and were confident in their ability to instruct. Participants’ scores on self-efficacy in student engagement were either the lowest or second-lowest among the subscores. Teachers that have high self-efficacy in student engagement can engage, motivate, and support students. Among the three subscores, efficacy in student engagement had the lowest mean score when responses from all participants were averaged. Participant 2 may have had less confidence than his peers in the focus group, especially in the area of instructional practices. The researcher therefore allowed Participants 2 and 3 more time
to respond to questions as they may have had less confidence. In addition, the researcher had each participant share his or her feelings about implementing the changes.

After the analysis by subgroup, the researcher examined each question in each subgroup. The three subscores of the Teacher Self-Efficacy Survey can be related to components of the theoretical framework. First, the researcher looked at the mean scores for each question in the self-efficacy in student engagement subgroup score (Table 18). Self-efficacy in student engagement is aligned to the teachers’ ability to engage, motivate, and support students. In each subgroup, the question mean value responses were then examined for patterns.

Table 18

<table>
<thead>
<tr>
<th></th>
<th>How much can you do</th>
<th>How much can you do</th>
<th>How much can you do</th>
<th>How much can you do</th>
<th>How much can you do</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much can you do to get through to the most difficult students?</td>
<td>6.5</td>
<td>7.25</td>
<td>6</td>
<td>6.75</td>
<td>7.25</td>
</tr>
<tr>
<td>How much can you do to help students think critically?</td>
<td>6</td>
<td>7.25</td>
<td>7.25</td>
<td>7.25</td>
<td>6.75</td>
</tr>
<tr>
<td>How much can you do to improve their understanding of a student who is failing?</td>
<td>6</td>
<td>7.25</td>
<td>7.25</td>
<td>6.75</td>
<td>6</td>
</tr>
</tbody>
</table>

With regard to teacher self-efficacy in student engagement, the teachers scored higher on questions regarding student engagement to think critically, value learning, and foster creativity. Lower scores were found in questions dealing with engaging difficult students and students who have low interest. The lowest self-efficacy scores were related to getting through to difficult students, motivating students who showed little interest, and assisting families in helping their children. The data suggests that the teachers in this focus group may struggle with forces perceived to be beyond their locus of control such as parents and community influences.
Close question analysis was also performed on the subscore for instructional practices (Table 19). Self-efficacy in instructional practices is related to the teachers’ ability to provide students with opportunities to master content. The mean scores for all participants on each question were determined.

Table 19

*Self-efficacy in Instructional Practices*

<table>
<thead>
<tr>
<th>How well can you respond to difficult questions from your students?</th>
<th>How much can you gauge student comprehension of what you have taught?</th>
<th>To what extent can you craft good questions for your students?</th>
<th>How much can you do to adjust your lessons to the proper level for individual students?</th>
<th>How much can you use a variety of assessment strategies for your classroom?</th>
<th>How well can you implement alternative strategies in your classroom?</th>
<th>How well can you provide appropriate challenges for very capable students?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean Score</td>
<td>7.25</td>
<td>7.5</td>
<td>7.5</td>
<td>7</td>
<td>7</td>
<td>6</td>
</tr>
</tbody>
</table>

Higher self-efficacy in instructional practices was found in areas where teachers had to create questions, respond to difficult questions, and assess student knowledge. As found in the document review, teachers have had direct professional development in question creation, the level of rigor, and the use and development of summative assessment and formative increasing assessment. Lower self-efficacy was found in implementing alternative strategies in the classroom and differentiating instruction. Similar to self-efficacy in student engagement, teachers may struggle with reaching a variety of learners. The professional development documents revealed that there was little documented emphasis on differentiation and alternative strategies.

Question analysis was performed for the self-efficacy in classroom management subgroup (Table 20). There mean scores for each question were determined. Self-efficacy in
classroom management is related to the teachers’ ability to handle complex tasks and their ability to instruct.

Table 20

**Self-efficacy in classroom management**

<table>
<thead>
<tr>
<th>To what extent can you make your expectancies clear about student behavior in the classroom?</th>
<th>How much can you establish routines to keep children to follow classroom rules?</th>
<th>How much can you do to get a student who is disruptive or noisy?</th>
<th>How much can you do to control disruptive behavior?</th>
<th>How well can you establish a classroom management system with each group of students?</th>
<th>How well can you keep a few problem students from ruining an entire lesson?</th>
<th>How well can you respond to defiant students?</th>
</tr>
</thead>
<tbody>
<tr>
<td>How much can you do to calm a disruptive student who is disruptive or noisy?</td>
<td>How well can you establish a classroom management system for a variety of students?</td>
<td>How well can you keep a few problem students from ruining an entire lesson?</td>
<td>How well can you respond to defiant students?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean Score</td>
<td>7.75</td>
<td>7.5</td>
<td>7.5</td>
<td>7.75</td>
<td>7.25</td>
<td>7.75</td>
</tr>
</tbody>
</table>

Self-efficacy in classroom management was found to be strong across all areas. Teachers reported being effective in areas such as controlling disruptive behavior and in establishing a classroom management system for a variety of students. As with other subscores, teachers had lower self-efficacy with regards to difficult students. This result is similar to the other subscores where the teachers perceived their abilities to be lower with difficult students.

The researcher sought to answer the question: How do teachers perceive their instructional self-efficacy since the implementation of RTTT initiatives? Based on the survey data, it appears that teachers have average to above-average self-efficacy. The researcher interpreted the strong response to the self-efficacy survey as suggesting that the teachers have been provided with a supportive work environment. The professional development document review detailed direct support on instructional skills needed to effectively implement the curricular changes. The teachers may have had difficulty with struggling and non-motivated learners while implementing the standards and assessment as they had lower scores in this area on the TSES. Based on the document review, difficult students, students with low motivation,
and outside parental influence was not been a focus of professional development and therefore teachers had not received support on how to address those areas. Based on the survey results, the teachers had higher scores on his/her ability to provide students with opportunities to master content and should have had the instructional skills to do so. Utilizing the results from the self-efficacy survey will inform and provide context to the responses to the focus group interview.

**Focus Group Interview**

**Protocols.** In October 2017, a focus group was convened to answer a collection of open-ended questions. Prior to the focus group interview, all participants were given the consent form. Participants had the opportunity to read the consent form and ask questions, and then the consent form was reviewed with the participants. All participants signed the consent form before the focus group interview. Questions for the focus group were written prior to the meeting. The information from the professional development document review, student achievement data, and the TSES was used to inform the questions. Each data set was analyzed based upon the previous data sets, as questions were reworded and probing questions were developed to explore the facets of the data that needed further explanation. Specific changes included teachers being asked about changes since the implementation of the Smarter Balanced assessment and whether they had participated in classroom observations or walkthroughs.

The interview was recorded using iPhone Voice Memos and transcribed using the Rev.com transcription service. The transcription was reviewed for accuracy by the author. The participants were asked questions that were directly related to the components of the theoretical framework (Table 21). Question 1 through question 10 are related to research question 1) How do teachers perceive their instructional practices been impacted since the implementation of RTTT curriculum and assessment initiatives? Question 11 through question 13 are related to
research question 2) How do teachers perceive their instructional self-efficacy since the implementation of RTTT initiatives?
Table 21  
*Focus Group Interview Questions*

<table>
<thead>
<tr>
<th>Question</th>
<th>Focus group interview questions</th>
<th>Theoretical framework components</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Describe your involvement in the new standards, Smarter Balanced assessment, and evaluation plan (e.g., have you served on any committees, written curriculum, provided training).</td>
<td>Include staff in the change process</td>
</tr>
<tr>
<td>1a</td>
<td>Probe: Have you served on any committees, written any curriculum, provided any training? If so, what has your experience been?</td>
<td>Include staff in the change process</td>
</tr>
<tr>
<td>2</td>
<td>Describe any professional development you have received with regard to the new standards, standards-based test, and evaluation plan.</td>
<td>Develop internal capacity</td>
</tr>
<tr>
<td>2a</td>
<td>Probe: Did you receive any professional development on the evaluation plan?</td>
<td>Develop internal capacity</td>
</tr>
<tr>
<td>3</td>
<td>Describe your experience with the implementation of the new evaluation plan.</td>
<td>Build internal accountability linked to external accountability</td>
</tr>
<tr>
<td>4</td>
<td>Describe any support you have received with regard to the new standards, standards-based test, and evaluation plan.</td>
<td>Create positive pressure by removing excuses</td>
</tr>
<tr>
<td>4a</td>
<td>Probe: Is there anything you haven’t mentioned that you would like to mention, with regard to support with the standards, Smarter Balanced test, or evaluation.</td>
<td>Create positive pressure by removing excuses</td>
</tr>
<tr>
<td>5</td>
<td>What has been your experience with the school and community reaction to the Smarter Balance and CT Core Standards implementation?</td>
<td>Build public confidence</td>
</tr>
<tr>
<td>5a</td>
<td>Probe: What changed from one year to another?</td>
<td>Changes were made in materials, practice, and beliefs.</td>
</tr>
<tr>
<td>6</td>
<td>In looking at the assessment data, there was a significant change from one year to another and continued growth. What do you think caused that increase and helped it continue?</td>
<td>Changes were made in materials, practice, and beliefs.</td>
</tr>
<tr>
<td>6a</td>
<td>Probe: What does it look like?</td>
<td>Changes were made in materials, practice, and beliefs.</td>
</tr>
<tr>
<td>7</td>
<td>When you think about your instructional practice before the changes and your instructional practice now, what looks different?</td>
<td>Changes were made in materials, practice, and beliefs.</td>
</tr>
<tr>
<td>7a</td>
<td>Probe: Do you think the test has driven the changes, the standards, or the evaluation</td>
<td>Changes were made in materials, practice, and beliefs.</td>
</tr>
<tr>
<td>Question</td>
<td>Response</td>
<td></td>
</tr>
<tr>
<td>--------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>8. When you think of the professional development you have received, what has been the most impactful on your instruction?</td>
<td>Teachers were provided with mastery and vicarious experiences</td>
<td></td>
</tr>
<tr>
<td>9. How would you describe the culture and climate of the school during these years?</td>
<td>Teachers did not have an increase in stress.</td>
<td></td>
</tr>
<tr>
<td>10. Have you noticed a difference in the presence of administration in your buildings or changes in visits?</td>
<td>School leaders use social persuasion</td>
<td></td>
</tr>
<tr>
<td>10a. Have you been involved in any walkthroughs?</td>
<td>Teachers were provided with mastery and vicarious experiences</td>
<td></td>
</tr>
<tr>
<td>11. When you’re preparing for the Smarter Balance test how is it the same or different than preparing for the CMT?</td>
<td>Teachers with strong self-efficacy provide students with opportunities to master content</td>
<td></td>
</tr>
<tr>
<td>12. When you think of your own personal practice and your own abilities and your own effectiveness to instruct, how have they been influenced by the new standards and assessments?</td>
<td>Teachers with high self-efficacy ability to handle complex tasks and are confident in their ability to instruct</td>
<td></td>
</tr>
<tr>
<td>12a. Have you felt that you were either asked to do things that you were unable to do or that were above you as a teacher, or did you feel that the things you asked to do were within your control or within your capabilities?</td>
<td>Teachers with high self-efficacy ability to handle complex tasks and are confident in their ability to instruct</td>
<td></td>
</tr>
<tr>
<td>12b. Have you noticed a difference in your own emotional health or your peers/colleagues emotional health?</td>
<td>Teachers did not have an increase in emotional arousal</td>
<td></td>
</tr>
<tr>
<td>13. How has your ability to engage, motivate, and support students been influenced by new standards and assessments?</td>
<td>Teachers with high self-efficacy have the ability to engage, motivate, and support students.</td>
<td></td>
</tr>
</tbody>
</table>

**Summary of coding frequency.** The focus group data was entered into MAXQDA research software to be coded and analyzed. Predetermined codes were initially used to code the data. Codes were determined prior to the study and after the collection, review, and analysis of the documentation review and survey data. Structural coding was used in the first round to analyze the focus group data. Initial codes were predetermined. Data was reviewed for the anticipated themes and the predetermined codes were assigned. During the first round of coding it was determined that additional codes were needed in order to represent the data.
The codes used in the first cycle of coding were initially determined in alignment with the theoretical framework. Codes that begin with EC relate to components of educational change theory; codes that begin with SE relate to components of self-efficacy theory. Using the components of educational change theory and self-efficacy theory, sub codes were identified. Table 22 lists the codes that were used in the first cycle of coding.
Table 22

First Cycle of Coding

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Frequency of coding</th>
</tr>
</thead>
<tbody>
<tr>
<td>SE-ABL-STD</td>
<td>Ability - Standards</td>
<td>6</td>
</tr>
<tr>
<td>SE-ABL-I</td>
<td>Ability - Instruction</td>
<td>6</td>
</tr>
<tr>
<td>SE-ABL-CTRL</td>
<td>Ability - Control</td>
<td>4</td>
</tr>
<tr>
<td>EC-ACC-STD</td>
<td>Accountability - Standards</td>
<td>3</td>
</tr>
<tr>
<td>EC-ACC-T</td>
<td>Accountability - Tests</td>
<td>5</td>
</tr>
<tr>
<td>EC-CAP-ASM</td>
<td>Capacity - Assessment</td>
<td>2</td>
</tr>
<tr>
<td>EC-CHG-B</td>
<td>Change - Beliefs</td>
<td>9</td>
</tr>
<tr>
<td>EC-CHG-I</td>
<td>Change - Instruction</td>
<td>18</td>
</tr>
<tr>
<td>EC-CHG-M</td>
<td>Change - Materials</td>
<td>7</td>
</tr>
<tr>
<td>EC-CON-P</td>
<td>Confidence - Parents</td>
<td>5</td>
</tr>
<tr>
<td>EC-CON-COM</td>
<td>Confidence - Communication</td>
<td>4</td>
</tr>
<tr>
<td>EC-CON-FB</td>
<td>Confidence - Feedback</td>
<td>2</td>
</tr>
<tr>
<td>EC-INC-COL</td>
<td>Inclusion - Collaboration</td>
<td>3</td>
</tr>
<tr>
<td>EC-INC-PD</td>
<td>Inclusion - PD</td>
<td>3</td>
</tr>
<tr>
<td>EC-INC-PART</td>
<td>Inclusion - Participant</td>
<td>5</td>
</tr>
<tr>
<td>EC-P</td>
<td>Pressure</td>
<td>9</td>
</tr>
<tr>
<td>EC-P-S</td>
<td>Pressure - Stress</td>
<td>3</td>
</tr>
<tr>
<td>EC-P-T</td>
<td>Pressure - Time</td>
<td>4</td>
</tr>
<tr>
<td>EC-P-R</td>
<td>Pressure - Resources</td>
<td>4</td>
</tr>
<tr>
<td>SE-COM</td>
<td>Communication</td>
<td>11</td>
</tr>
<tr>
<td>SE-EMO-POS</td>
<td>Emotion - Positive</td>
<td>4</td>
</tr>
<tr>
<td>SE-EMP-NEG</td>
<td>Emotion - Negative</td>
<td>23</td>
</tr>
<tr>
<td>SE-EXP</td>
<td>Experiences</td>
<td>3</td>
</tr>
<tr>
<td>SE-MOT-EXT</td>
<td>Motivation - External</td>
<td>1</td>
</tr>
<tr>
<td>SE-MOT-SUP</td>
<td>Motivation - Support</td>
<td>8</td>
</tr>
<tr>
<td>SE-MOT-INT</td>
<td>Motivation - Internal</td>
<td>2</td>
</tr>
<tr>
<td>SE-SEL-PREP</td>
<td>Selection - Prep</td>
<td>11</td>
</tr>
<tr>
<td>SE-SEL-MAT</td>
<td>Selection - Materials</td>
<td>3</td>
</tr>
<tr>
<td>SE-SEL-ABL</td>
<td>Selection - Activities</td>
<td>4</td>
</tr>
</tbody>
</table>

The analysis included identifying components of educational change and self-efficacy that were mentioned by the participants in the focus group. With regard to educational change, the themes of accountability, capacity, change, confidence, implementation, inclusion, and
pressure emerged. Self-efficacy components included themes of motivation, selection, experiences, emotion, communication, and ability. After reading the focus group transcription, the researcher coded the document with the predetermined codes. The transcription was then revisited, with codes being added, subtracted, or combined in order to capture the data accurately. After multiple pass through of the data, until the researcher determined the emergent themes. Analysis of the focus group interview transcript revealed 33 references to components of educational change, changes in instruction, materials, and beliefs. With regard to self-efficacy, there were 27 references to emotional responses. Once the first cycle was complete a second cycle was used.

The second round of analysis was completed using in vivo coding. In vivo coding uses the participant’s own words as the codes. In this second round of coding, the researcher used the themes identified to generate the in vivo codes. The frequency of the participant’s words was identified. The words identified were then aligned to codes that were related to the theoretical framework. The frequency of the codes from the second cycle of coding is shown in Table 23.

Table 23

<table>
<thead>
<tr>
<th>In vivo word or phrase</th>
<th>Related code</th>
<th>Frequency of coding</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common core</td>
<td>EC-ACC-STD</td>
<td>24</td>
</tr>
<tr>
<td>Questions</td>
<td>SE-SEL-ACT</td>
<td>48</td>
</tr>
<tr>
<td>Stress</td>
<td>SE-EMO-NEG</td>
<td>13</td>
</tr>
<tr>
<td>Rigor</td>
<td>EC-CHG-I</td>
<td>14</td>
</tr>
<tr>
<td>SBAC or SB or Smarter balanced</td>
<td>EC-ACC-T</td>
<td>81</td>
</tr>
<tr>
<td>Evaluation</td>
<td>EC-CHG-EVAL</td>
<td>5</td>
</tr>
<tr>
<td>Perseverance</td>
<td>SE-MOT-INT</td>
<td>4</td>
</tr>
<tr>
<td>Curriculum</td>
<td>EC-CHG-MAT</td>
<td>17</td>
</tr>
</tbody>
</table>
The new standards based assessment, “SBAC,” or “Smarter Balanced” was mentioned 81 times, almost double the second-most mentioned, “questions.” The use of the word “questions” often referred to the question types and styles the teachers selected to prepare students appropriately for the rigor and challenge of the Smarter Balanced assessment. The word “questions” could be closely associated with the “Smarter Balanced” frequency to bring a total of 129 instances of mentioning either the assessment or assessment question types. “Common Core” was a phrase used 24 times; suggesting that teachers’ perceptions of the CCSS had a lesser influence than the standards-based assessment. These phrases were related to pre-determined codes. This cycle of coding was then compared to the first cycle. Using the two cycles of codes, themes emerged based on the frequency and type of code.

**Summary of thematic reduction of codes.** Through thoughtful analysis of the focus group transcript, a number of themes emerged from the participants responses. The transcript and MAXQDA data were again revisited and analyzed. The identified codes were then linked to a thematic reduction code (Table 24).
Table 24

Focus Group Thematic Reduction of Codes

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Theme</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC-ACC-STD</td>
<td>Accountability - Standards</td>
<td>Internal accountability linked to external accountability</td>
</tr>
<tr>
<td>EC-ACC-T</td>
<td>Accountability- Tests</td>
<td>Develop internal capacity</td>
</tr>
<tr>
<td>EC-CAP-ASM</td>
<td>Capacity- Assessment</td>
<td>Develop internal capacity</td>
</tr>
<tr>
<td>EC-CHG-B</td>
<td>Change- Beliefs</td>
<td>Shifts were made in practices and beliefs</td>
</tr>
<tr>
<td>EC-CHG-I</td>
<td>Change - Instruction</td>
<td>Changes were made in materials</td>
</tr>
<tr>
<td>EC-CHG-M</td>
<td>Change- Materials</td>
<td>Changes were made in materials</td>
</tr>
<tr>
<td>EC-CON-P</td>
<td>Confidence- Parents</td>
<td>Build public confidence</td>
</tr>
<tr>
<td>EC-CON-COM</td>
<td>Confidence-Communication</td>
<td>Build public confidence</td>
</tr>
<tr>
<td>EC-CON-FB</td>
<td>Confidence- Feedback</td>
<td>Build public confidence</td>
</tr>
<tr>
<td>EC-INC-COL</td>
<td>Inclusion- Collaboration</td>
<td>Include staff in the change process with mastery and vicarious experiences</td>
</tr>
<tr>
<td>EC-INC-PD</td>
<td>Inclusion- PD</td>
<td>Include staff in the change process with mastery and vicarious experiences</td>
</tr>
<tr>
<td>EC-INC-PART</td>
<td>Inclusion-Participant</td>
<td>Include staff in the change process with mastery and vicarious experiences</td>
</tr>
<tr>
<td>SE-EXP</td>
<td>Experiences</td>
<td></td>
</tr>
<tr>
<td>SE-COM</td>
<td>Communication</td>
<td></td>
</tr>
<tr>
<td>SE-EMO-POS</td>
<td>Emotion- Positive</td>
<td>Teachers experienced stress</td>
</tr>
<tr>
<td>SE-EMP-NEG</td>
<td>Emotion - Negative</td>
<td>Teachers experienced stress</td>
</tr>
<tr>
<td>EC-P</td>
<td>Pressure</td>
<td></td>
</tr>
<tr>
<td>EC-P-S</td>
<td>Pressure - Stress</td>
<td></td>
</tr>
<tr>
<td>EC-P-T</td>
<td>Pressure- Time</td>
<td></td>
</tr>
<tr>
<td>SE-MOT-EXT</td>
<td>Motivation- External</td>
<td>Teachers have strong self-efficacy</td>
</tr>
<tr>
<td>SE-MOT-SUP</td>
<td>Motivation- Support</td>
<td></td>
</tr>
<tr>
<td>SE-MOT-INT</td>
<td>Motivation - Internal</td>
<td></td>
</tr>
<tr>
<td>SE-SEL-PREP</td>
<td>Selection -Prep</td>
<td></td>
</tr>
<tr>
<td>SE-SEL-MAT</td>
<td>Selection -Materials</td>
<td></td>
</tr>
<tr>
<td>SE-SEL-ABL</td>
<td>Selection - Activities</td>
<td></td>
</tr>
<tr>
<td>SE-ABL-STD</td>
<td>Ability - Standards</td>
<td></td>
</tr>
<tr>
<td>SE-ABL-I</td>
<td>Ability - Instruction</td>
<td></td>
</tr>
<tr>
<td>SE-ABL-CTRL</td>
<td>Ability- Control</td>
<td></td>
</tr>
</tbody>
</table>

Patterns in the codes were examined to develop the themes. The themes that emerged were: *Internal accountability linked to external accountability, Develop internal capacity, Changes were made in materials, Changes were made in practices and beliefs, Build public*
confidence, Include staff in the change process with mastery and vicarious experiences, Teachers experienced stress, School leaders use social persuasion, and Teachers have strong self-efficacy.

Each of these themes will be examined in the following sections.

**Internal accountability linked to external accountability.** The influence of the standards-based assessment, the Smarter Balanced Test (SB or SBAC), was evident in the teachers’ awareness of the impending tests. SBAC or SB or Smarter Balance was mentioned 81 times throughout the focus group interview. Teachers mentioned the changes to Smarter Balanced assessment from the previous accountability measure, the Connecticut Mastery Test (CMT).

Participant 4 said the questions on the Smarter Balanced Test were “more wordy.” The CMT was administered since 1985 and had undergone four revisions or “generations”. The questions and answers were always released to teachers after each assessment, providing clear expectations. As Participant 1 described, with the CMT “you know what you were doing.” Changing to the Smarter Balanced assessment also required a change to how the test was administered. The CMT was a paper and pencil test, whereas the Smarter Balanced test is administered on the computer and is adaptive.

Due to the online delivery, the test question types are different. The test is adaptable and questions given to the student may be different than his or her classmate. The format of the questions also changed with the new technology. For the CMT, questions were multiple choice, grid in, and open response. With the Smarter Balanced test, the question types could include multiple choice, multiple answers, free response, as well as interactive questions which require the students to navigate the online environment. Participant 2 shared that the shift in how the questions were asked were a change for both themselves and the students. The teachers described how they received professional development on question creation as well as
professional development from a writer of the Smarter Balanced test. On the CMT, Participant 2 shared how the CMT had multiple choice questions with one correct answer, on the SB assessment, questions may have more than right answer. The change in question type was a focus area for teachers in this district. Participant 4 described how the department chairs would spend time with the members of the department recreating lessons with questions modeled after the Smarter Balanced test. Embedding question types into the curriculum was a consistent practice among all four participants.

Teachers stated that they would prepare students for the test throughout the year by embedding question types. Participant 3 stated, “It’s always on the horizon like planning with a lesson or planning a unit … how could I use this activity that we’re doing so prepare them for testing in the spring.” This was a change from the traditional “test prep” that occurred previously. Participant 2 said, “I didn’t try to just teach to the test... we create questions that were SBAC-like and insert them into what we are doing regularly.” Of all the members of the focus group, only one, Participant 4, described special test prep work beyond the more organic embedding of questions. She explained that the math department did two or three SBAC warm up problems at the beginning of each period. She also described “SBAC Fridays,” when they did specific Smarter Balanced style problems from January to when the test is administered. Smarter Balanced claims are identified statements of what students should be able to know and do. In these activities, students would work on problems were separated into “claims” which the students do every Friday from mid-January until the test. After hearing about the ways in which the other participants prepared students, Participant 4 shared she felt guilty engaging students in traditional test prep. Other teachers mentioned “guilt” when it comes to Smarter Balanced “test prep”. However, Participant 2 clarified that these are critical thinking questions allowing
students to think about the content in a different way: “Yes, do they mirror the questions on the SBAC, they do, but they’re also critical thinking questions.”

The Smarter Balanced test is administered on the computer, so preparing students for the assessment through the use of technology became a part of their practice. Participant 2 described how he used technology to develop students’ auditory skills through a listening exercise. Another use of technology as a result of the Smarter Balanced test was using Google Documents to annotate writing. Since the teachers had little control over the test and were not provided previous test questions, they needed to focus on the areas they could control. This led to a focus on changing the materials and curriculum to embed Smarter Balanced type questions and strategies.

**Develop internal capacity.** In order to prepare students for the Smarter Balanced assessment, teachers had to receive training on the assessment as well. During the focus group, the participants did not mention the professional development they received in 2015-2016. Upon reflection, teachers remembered getting professional development around “question creation” related to the Smarter Balanced assessment. Although they did not explicitly mention the training, their communication about reading and writing suggested that the professional learning that occurred had been embedded in their vernacular. Teachers shared that the school district was “all using the same language” and shared that they were aligning their practices. For example the participants consistently used common language such as “brief writes”. Brief writes are writing stimuli given on the Smarter Balanced assessment, in which students would write between 200 to 250 words. The stimuli could be narrative, explanatory, or opinion writing. In addition to the brief writes activity, participants used examples of other strategies, such as annotation, asking students to answer questions based on evidence in the passage or problem.
The changes teachers made based on the Smarter Balanced assessments were a driving force in the changes in the district. In order to implement changes for the test, teachers had to have the resources to implement the changes. As a result, changes in resources allowed for a shift in changes in practices and beliefs.

*Changes were made in materials.* The focus group participants mentioned the Common Core Standards 24 times, second only to mentions of the standards-based assessment. Both had a much higher frequency than the third policy change, the teacher evaluation plan. Members of the focus group mentioned that the new standards in the district did not initially drive a major change to their current instructional practices. Participant 1, who had the highest self-efficacy appeared to be the most accepting of the changes, “Common Core standards it was very, very similar to things that we had been doing. It was, in some ways it was nice, it validated what you've been teaching.” Participant 4 who also had higher self-efficacy, concurred, adding that the standards were the same content, with one specific change: “The Common Core is again it wasn’t that different in terms of what we were to know, but in terms of the rigor.” The level of rigor was mentioned by all disciplines (English, mathematics, social studies).

To reach this level of rigor, teachers mentioned the selection of reading materials with a higher Lexile level. This meant shifting away from textbooks to readings from online sites or other materials that had a Lexile level of 1000 or more. For a Grade 6 reader, the Lexile range is 885L to 1165L, for a Grade 7 reader the range is 925L to 1235L, for a Grade 8 reader, the range is 985L to 1295L. Using a Lexile range around 1000 is appropriate for the middle school instructional level. Participant 2 shared that this has enabled the student to become acquainted with vocabulary and critical thinking concepts that are more rigorous than they have been previously introduced.
Similar work was done in the social studies department, as Participant 1 explained how they now use articles that are more rigorous, with a higher Lexile level. They also have “more emphasis on vocabulary as well as those questions that don’t always have that one easy answer.”

**Changes were made in practices and beliefs.** Participant 2 explained there was the belief that the new standards and standards-based assessment was temporary. He explained, “there was also the fact that - ‘Oh, this is going to go away and this is not going to count.’ And many, many people, faculty, students did not take it with the rigor that they needed to.” In the first full test administration in the spring of 2015, many parents were opting their students out. The teachers all concurred that this was an issue in this district especially at the secondary levels.

Despite the vocal opposition from the community, other teachers, and students, the teachers felt they had adequately prepared the students for the 2015 administration. After the first administration, upon receiving the scores, “the world changed a little bit,” said Participant 1. This was in reaction to the results that were disparate from their previously successful CMT results. In response, the district held several parent information sessions, educating the community about the Connecticut Core Standards and the Smarter Balanced Assessment. Participant 1 shared that having district run communication to the community was an important step in clarifying the misconceptions and gaps in understanding that previously existed.

Participant 2 explained how he sat down with department members at the beginning of the school year after receiving the results to try and come up with a solution. He described sitting with colleagues asking “what are we going to do?” and how he looked online for test prep books which they ordered and began to use. There was a feverishness in his voice as he described how they kept trying new things, “Then, we’re going to try to implement these brief writes into all of the academic areas if possible we need to work with social studies, we need to
work with science.” He continued to describe how he “we met almost once a week or twice with grade level colleagues and the department chair and to implement this game plan and we held tight to it and we went through it every, work together.” It appeared that in his perception there was a continuous effort by the entire English department to work together to improve student achievement. It was not a singular strategy or initiative but a regular effort to implement instructional strategies and materials.

Once Participant 2 concluded, Participant 1 described the similar efforts in the social studies department. They worked on “finding documents and finding more primary sources and, and more rigorous secondary sources”, which was similar to the ELA department. She concurred that the two departments met together to learn about “brief writes” and the two departments aligned their practices through the use of rubrics.

These changes were not isolated to these two departments. Across the district, there was more reading and writing. The interviewees described reading and writing that their colleagues were doing in other disciplines, such as chorus, physical education, and world languages. They enthusiastically described mathematics that was done in science and family consumer science. Participant 1 explained, “I think the mindset changed and...I think that it became a school-wide effort.” Teachers shared their experiences of finding new reading materials that had an increased level of rigor. They were asking students to engage in questions that involved more critical thinking. Participant 3 described his experience of planning which included considering the Lexile level of the reading, considering the types of questions being asked as well as the difficulty level. He shared that, “Since we switched over to the Smarter Balanced I’m more aware of the type of work that I’m doing and make its hard enough.”
Teachers included more writing in math as well. Participant 4 shared that she asks students to engage in more writing prompts in her mathematics classes. She is asking students to explain their answer, show the steps that they are taking, and explain why an answer does or doesn’t work. This is going beyond asking student to solve an equation and getting an answer to a more metacognitive experience where students are reflecting on the process of how answers are being determined. Once Participant 4 concluded, Participant 3 realized he was doing similar work in Social studies. He acknowledged that he was asking students to show work, explain how they got the answer and how they know they have reached a conclusion. Both teachers shared the emphasis on having students find evidence to support their work. This included teaching students strategies such as annotation and highlighting skills.

*Build public confidence.* The implementations of the evaluation plan, standards, and assessments were all fraught with inconsistencies and changes. The evaluation plan was first implemented with the intention of using the results from the Smarter Balanced test as a measure included in the plan. Participant 2 shared that there was concern by the teachers that the evaluation plan was going to be tied to the Smarter Balanced scores, which caused a lot of teachers to very upset. One concern was regarding teachers that have different groups of students being evaluated the same way. If one group is very successful on the Smarter Balanced test because they are a higher performing group, whereas another teacher may have a lower performing group judged by the same criteria. Teachers shared that there were multiple meetings with the teachers union and the school administration to work collaboratively on developing a solution. This concern was allayed by the state allowing school districts to include measures other than the Smarter Balanced assessment as part of the evaluation plan. This made the implementation of the plan go rather smoothly, as there were no concerns by the participants
regarding this issue. The teachers reported that they felt comfortable with the plan and the support they were given by administrators.

The implementation of the Connecticut Core Standards and the Smarter Balanced test affected the teachers, students, and the broader community. There was an opt-out movement in this district, with parents opting students out of the Smarter Balanced test in the first year. This was due, in part, to a lack of communication by the state regarding the Connecticut Core Standards and the Smarter Balanced test. Participant 1, who was also a town resident, described the issue: “I mean there were a lot of...pushback [by parents]...but I think honestly, I think a lot of it was because the parents...didn’t know what Common Core and SBAC were.” This criticism was of the state, not of the district: “I don’t believe the rollout was completely clear. Because a lot of parents felt that Common Core and SBAC were the same thing.” This belief was shared by all focus group participants. The pushback was surprising to some. Participant 1 said, “I don’t think anybody anticipated the pushback.... I think the parent reactions surprised people that first year.” Teachers shared that they treated the new Smarter Balanced and its preparation similar to how they prepared for the CMT, however in the teacher’s perspective when the community heard “SBAC”, they “freaked out”, having a negative reaction which led to multiple families opting their children out of the testing. After the first year of the assessment, the school district held community meetings to explain the standards and the test. Participant 1 believed that this helped: “I think [the district] did a good job in clarifying that for parents.”

The district provided professional development with a member of the state education department. However, it appeared that this work was not helpful for some. Participant 2 explained his experience with a consultant from the Connecticut State Education office. He shared that it was not very helpful since the presentation contained a lot of “jargon” that didn’t
“resonate with me”. The feeling was that the language being used was not something they were familiar with nor was it something he would be able to incorporate into his daily lessons.

In addition, teachers were given changing information about the test from year to year. The teachers expressed they could not trust the person delivering the information they were given because the information was changing so frequently. Participant 2 said during those first few years, from 2014-2016 that the Smarter Balanced test was often changing and the communications were that the question types given one year may or may not be the same type used the next year. The same communication was given regarding the scoring of questions and how the questions may be scored differently from year to year. This was a change from the CMT which was very clear which question style were used and the point allotment for each questions. The teacher felt that they “were left in the dark” which was “challenging”. Participant 1 concurred with Participant 2, telling about the changes from year 1 to year 2 of implementation when they were working all year on argumentative writing and essay writing and they found out these styles of writing was no longer on the assessment. The teachers were told only brief writes would be included. Teachers had spent hours working on how to score this type of writing, only to have it struck from the test. When the test arrived, teachers and students were surprised to see students were asked to write a longer passage, longer than three paragraphs, and were frustrated. The feelings of frustration led to feeling exasperated since it was out of their control. Participant 1 said the changes during this implementation had an impact on the students and staff “that was frustrating for them [the students] and for us because we didn’t know what to tell them”. These changes made it more difficult for the teachers to prepare for the new exam. Participant 1 resolved that the students should “do your best” since “this is what it is”, appearing to have a fatigue about the continuous flux regarding the test.
In the spring of 2014, schools administered the Smarter Balanced pilot exam. School districts did not receive scores from the pilot. The next spring, 2015, the test was administered and scores were received. The scores received on this administration were low. Participant 1 described the change from 2014 to 2015. She felt that if they had received scores from the pilot, it would have given them some indication of their readiness for the test. The climate the first year was frustrating and the low test results surprised the teachers. Participant 1 shared that if they knew the scores from the pilot test, the teachers would have been able to adjust and better prepare the students prior to taking the “actual test” in 2015. She shared that “it wasn’t like we blew it (the 2015 administration) off. We prepared the kids.” She did not want to give an impression that they did not prepare students for the Smarter Balanced test, although this was contradictory to previous statements by the participants who said that many were waiting for this “to pass”.

Teachers perceived that the district filled the gaps the state left with students, parents, and the community. Participant 1 shared how she would explain the difference between the CCSS and the Smarter Balanced test to parents. She took the time to explain to parents that “the Common core is a set of standards” and “SBAC is a test. The test is based on those standards.” Those communications between teacher and parent were effective ways to implement change. The teachers’ shifting perceptions of the value of the test has shifted the perceptions of students and the broader community. Participant 4 shared that the student achievement data results would be used to inform placement decisions in other courses. She believed this has motivated students to want to do well and become excited to increase their own performance. The teachers shared that the work they were doing was important. The changes were evident in the test results from the 2016 administration. Participant 2 concurred: “In the second year, absolutely, and I believe
undoubtedly [we took it more seriously]...That that had a lot to do with the tremendous strides that this district made.”

**Teachers experienced stress.** When asked about the impact the policy changes have had on their social and emotional wellbeing, teachers overwhelmingly mentioned stress as a side effect of the changes. Teachers mentioned the computer-based test as a source of stress which caused logistical issues for one teacher.

Participant 1 described her experience as she experienced technical problems and she was worried that the test would not be valid. Having a test administered on the computer was an additional layer of stress; it was “a layer that you couldn’t even control.” She recounted that during a hot, spring day, she was administering the test. She remembers one student raising their hand, then another, and another. She recounted, “my computer is just spinning and I went “oh boy.” In this classroom, the Wi-Fi was not working correctly. In her recounting, the teacher commented on how stressful this situation was, especially because the things that could go wrong with the test were beyond her locus of control. Participant 4 shared that “the test itself raises the anxiety level in the building, to a level that’s ready to explode.” The lack of control in this test resulted in feelings of frustration and stress.

Both Participants 3 and 4 shared the stress of testing, with the latter saying, “The testing time is stressful for me more because just with the added, the, the computer piece adds a level of stress. It’s a layer that you couldn't even control,” and the former saying, “I’m stressed out and I’m not happy being this stressed out. I don’t like it.” Participant 1 described the first years of Smarter Balanced, 2014-2016 as being “painful,” and she felt “frustrated.” Participant 4 added that those first few years were stressful, and it was still painful. The level of rigor was a surprise
for some staff which caused concern. Participant 3 described his experience with first seeing a Smarter Balanced question, being a “culture shock”:

I remember meeting as department, with a paragraph and with 14 questions. Almost everyone in my department didn’t get past the fifth question. So, here we are, college educated teachers, and we're struggling with this; how are these kids going to do this?

Participant 4 described the feeling pressured by the district administration and the Board of Education to produce higher results. He stated that they (the district administration) wanted scores to be “better” yet it was conveyed in a nice, non-threatening way. This social pressure was felt by other teachers. The teachers described 2015, the first year they received scores, as stressful. They recounted the many meetings about the test scores. Participant 3, who has a less vocal participant in the focus group, told an allegory regarding his experience with the changes. He shared that the stress he feels, is “like a horse race”. In this race, he said, “the trainers keep pushing the horses to go faster, faster, faster, and faster but nobody is asking the horse, “Do you like running that fast?” He hung his head, and reflected, “these poor kids, I could see it on their faces when we do testing,” sharing that the students feel resigned to the test. He worries that the stress is at an unhealthy level and whether it is worth putting people through this stress for good test scores. The racing to an invisible finish line was also surfaced by Participant 4, who talked about the changes in curriculum: “We’re so bound by the curriculum and so it’s so rigorous now. There is no time to breathe. So we have like time limits...so there is no vacant room for me that I’m like going, going, going.”

Participant 4 shared that she missed the flexibility and autonomy that existed prior to the implementation of the new standards and assessment. Participant 4 shared that she felt restricted and confined to the demands of the test. She missed being able to do things outside of the
curriculum. “I missed those things... It takes a little bit of the fun out for me; you know...we used to do Halloween songs and everything.”

**School leaders use social persuasion.** The teachers were aware that the student achievement data from not only their school, but also their departments and their individual classes were being analyzed by the district administrators. They felt pressure to increase test scores. This pressure came during the 2015-2016 school year, in the form of administrative presence in schools. Teachers had both announced and unannounced visits by building and district administrators to their classrooms. The test results had always been published in the local newspapers and teachers perceived they were being compared the other middle school in the district. The teachers were aware that they were being compared to their department colleagues.

Once test scores turned around, teachers saw positive feedback from the administration and community. They had classroom visits from a local school district staff member who wanted to find out what they were doing right. The feedback shifted from a focus on what we can do to improve to, in the words of Participant 2, “keep up the good work.” The teachers were given an ice cream party and a congratulations sign. Participant 2 explained the social persuasion and the feeling that “You were kind of aware that there was a little discomfort that people could have been watching you, individually, to make sure that your student scores perhaps lower on average than another teacher? What are you doing that he or she isn’t?”

Working with colleagues helped to mediate these feelings of pressure and stress. The teachers shared their experiences working in a supportive, collaborative culture. Participant 1 said, “People help each other and that helps us to get through it.” Participant 2 shared that working with colleagues had been really beneficial to his instruction: “sitting down with colleagues and being able to work with each other creating these questions to help students... We
were given that opportunity.” Participant 1 contributed that it was “nice to have the theory” from a guru, but putting the theory into practice was very meaningful work. Teachers expressed that they collaborated with colleagues on curriculum writing. Participant 2 added that the collaborative culture of the school has helped his feelings of self-efficacy. He shared that people get along and are friendly with each other. The positive climate in the school contributes to a collaborative culture which has helped him navigate the change. He contends that if you keep the “positive outlook, things will work well.”

**Teachers have strong self-efficacy.** Teachers were provided with professional development on increasing the rigor in their curriculum and also direct training on reading and writing strategies. In the self-efficacy survey, teachers reported having average to above-average perceptions of their ability to instruct. In the focus group, teachers shared their experiences implementing the curriculum and embedding Smarter Balanced style questions into the work. They shared the importance of increasing the rigor of the reading they assigned to students.

Teachers shared the increased emphasis on developing student perseverance. The Smarter Balanced test was longer than the previous CMT. Students were now expected to sit in front of a computer for hours at a time over multiple days. Teachers all felt a shared responsibility to develop student perseverance and patience. Participant 4 described the students needing to have a lot of patience and perseverance. To encourage these behaviors, she has included work that is longer than five minutes, implying that this is much longer than the typical mathematics problems that were more rote in nature. She hoped that providing students with work that requires sustained attention will cultivate the patience and perseverance behaviors. The teachers were aware of their duty to support students, to engage them in the material, and to motivate them. This occurred in a variety of ways. Participant 1 shared how she explains testing to her
students and the consideration of the emotional support the teachers provide. She tries to empathize with the students acknowledging that the work may be difficult. Although students may find the work default, she empathizes to them that she is there to support and help the students.

Teachers also tried to teach the students flexibility through the use of multiple methods. Participant 3 shared how he was changing up the style of questions and types of materials students are engaging in. This keeps students flexible, in his perspective. Since it is difficult to prepare for the assessment and predict what will be asked, he believes that by teaching students through multiple methods reduces student anxiety during the test. Participant 3 tried activities that would engage and motivate students. For example, he did a current event activity regarding kneeling during the National Anthem. Students were asked to pick a position and explain why he/she took that position. Students had to cite evidence from the readings they were given. Teachers in the group nodded in agreement regarding the need to engage students in the learning to help them apply their skills.

Preparation for the Smarter Balanced test was different than for the previously administered CMT. The CMT had regularly released questions, allowing teachers to use those for test preparation. Questions for the Smarter Balanced are not released. Participant 4 said, “Nobody can see the test.... You know that kids take it and it’s never seen anywhere. So and then they give one practice like online and that’s about it. That’s the only thing they have.” This made the preparation for the Smarter Balanced test different. Teachers were embedding question types into curriculum. They were using new strategies such as annotation, active reading, using evidence, and an emphasis on inquiry-based learning.
Although there was a great emphasis on the Smarter Balanced test, the teachers felt the emphasis was because the Smarter Balanced test is aligned to the Connecticut Core Standards. Participant 3 stated the skills developed are “necessary skills” and Participant 1 concurred, sharing that the skills in the Common Core are “skills that these kids need”. She shared that teachers are teaching the content aligned to the curriculum and standards regardless of whether it will show up on the Smarter Balanced assessment. In her opinion it was because this is “good teaching” and “good things” for students to learn. Participant 1 recognized that this was a shift for the teachers, having the skills embedded in the curriculum. Accountability related to standard alignment was demonstrated by Participant 1, who shared that efforts to align with the Common Core standards included team leaders bringing samples of student work and lessons to leadership meetings, providing evidence of the teachers’ efforts.

The focus group participants were active participants who expressed a passion for what do. The teachers shared their efforts at implementing the CT Core Standard skills and content needed for students to be successful on the Smarter Balanced assessment. The teacher evaluation plan did not appear to have much impact on their instruction or themselves due to the detachment of the plan to the Smarter Balanced assessment results. The evaluation plan has been implemented by administration in a supportive and flexible way. They did admit to feeling stress when asked, however, they did not discuss physical symptoms or thoughts of leaving the profession.

In analyzing the focus group data set, the researcher determined eight themes: Internal accountability linked to external accountability, Develop internal capacity, Changes were made in materials, Changes were made in practices and beliefs, Build public confidence, School leaders use social persuasion, Teachers experienced stress, and Teachers have strong self-
efficacy. Each theme was explored in depth. These themes were informed by the analysis of the student achievement data, professional development document review, and self-efficacy data sets. From these data sets, the researcher was able to determine findings relative to teachers’ experiences implementing RTTT policy changes.

Summary of Research Findings

Data Triangulation. According to case study protocol developed by Yin (1999), data triangulation increases the credibility of a researcher’s findings. In the initial data set of this case study, student achievement data was examined. The administration of the Smarter Balanced assessment in 2015 resulted in student achievement that was lower than the previously administered Connecticut Mastery Test. In 2016, the district saw a significant increase in student achievement as measured by the Smarter Balanced assessment. The changes in student achievement suggested to the researcher that there may have been changes in the content and instruction being delivered to students. Using this set of data, the researcher examined the professional development which was delivered in the 2015-2016 school year.

Professional development documents were reviewed. In the review, the researcher determined that staff was included in the change process, during the professional development sessions and through cadre time. Select groups teachers were provided with opportunities to observe other teachers. All teachers were provided with direct instruction in literacy. The analysis of this data led the researcher to examine through a focus group how the teachers have implemented the changes to the content and assessment and whether the teachers have embedded any of the information discussed during the professional development sessions. Deeper, more meaningful educational change would be indicated by a shift from test preparation to shifts in instructional practice and beliefs about the new standards and assessment.
The self-efficacy survey data indicates to the researcher that the teachers had moderate to above average self-efficacy. If there was any negative impact by the changes on the teacher’s self-efficacy, the self-efficacy had not deteriorated to any levels that would have a negative impact on instruction. It suggests that the teacher self-efficacy is intact. The moderate to high levels of self-efficacy possessed indicated the teachers would be able to implement instructional changes.

The information obtained through the focus group was an essential data set in this study. Through this data set, the researcher was able to hear from the teachers how they experienced the changes in their district. Through a detailed transcription of the interview and analysis of the documents, eight key themes emerged: *Internal accountability linked to external accountability*, *Develop internal capacity*, *Changes were made in materials*, *Changes were made in practices and beliefs*, *Build public confidence*, *School leaders use social persuasion*, *Teachers experienced stress*, and *Teachers have strong self-efficacy*. Teachers were affected by the Race to the Top initiatives. It was evident that the teachers were significantly impacted by the Smarter Balanced assessment more than the teacher evaluation plan and the Connecticut Core Standards.

Overall, the teachers provided a positive outlook for the school/district with the teachers experiencing stress, but not to such a significant level that they expressed thoughts of leaving the profession. They expressed an ability implement the changes required of them. Additionally, through the common language used by the teachers it was evident that they had been provided with consistent training in literacy, reading, and writing. They appeared to understand and be able to implement instructional skills that support student growth especially around the area of literacy. Teachers spoke frequently about finding ways to engage students in the learning, which
was another component of the professional development sessions. This would indicate that the PD given was internalized by the teachers.

The researcher sent the summary of the focus group via email to all the participants to assure that the summary of the focus group is accurate, the description is realistic, and the interpretations are fair (Creswell, 2012). Peer debriefing was utilized though a peer at the district office who has a doctoral degree. The peer reviewer reviewed the data and conclusions to achieve credibility. A third review of the data was be performed by an individual outside of the study to the report for strengths and weaknesses. This process of member checking and triangulation helped to ensure the dependability of the results.

**Findings.** The researcher used four data sets to research teachers’ experiences with Race to the Top policy implementation. The primary data set was a focus group interview. This data set was informed by student achievement data, professional development documents, and a self-efficacy survey. The researcher conducted the study to answer two research questions.

**Research question 1.** The first research question was: How do teachers perceive their instructional practices have been affected since the implementation of the RTTT curriculum and assessment initiatives?

**Finding 1: Teachers were provided with resources that enabled them to implement instructional changes**

Based on this researcher’s findings, it is evident that teaching and learning has been affected by the RTTT curriculum and assessment initiatives. Specifically, the district administration has leveraged the results from the Smarter Balanced assessment to make changes in the middle schools studied. Through coherent professional development, teachers have aligned their instruction in reading, writing, and mathematics between and among departments.
Themes of *teachers were active participants in the change process* and *developing internal capacity* were addressed through regular professional development. Professional development focused on content, allowing teachers to develop a common knowledge base, and also on instructional strategies through the use of activities that teachers could readily implement. Teachers were also instructed on how to select reading material at the appropriate Lexile level. This professional development, which was a reaction to the results of the Smarter Balanced test, was effective. Student achievement data increased significantly in the 2015-2016 school year. In addition, teachers in the focus group verbalized the content and strategies taught to them during the professional development, describing how they have implemented these items.

Another response to the low performance on the Smarter Balanced assessment administered in 2015 was the theme *Changes were made in materials*, which was discussed by multiple participants. They reported adopting new reading materials that were of increased rigor. The Lexile level of materials that teachers selected increased. This was due to direct professional development by the district on aligning reading and writing with the demands of the new standards. Curriculum was revised, adapted, and implemented to be in alignment with the CT Core Standards. This curriculum and instruction also embedded Smarter Balanced style question prompts. After the materials changed, the researcher observed the theme *Changes were made in practices and beliefs*. The implementation of the RTT policy initiatives included many unknowns and changes over time. There was a belief by the staff that the changes would not last and that the Smarter Balanced test and new standards might go away. When this did not happen, teachers shifted their perceptions. Teachers believed they needed to increase the rigor of the content they were providing to students. Teachers were reading and writing across disciplines
and the ownership of teaching reading and writing was shared among the departments. Students were receiving direct instruction on reading strategies, such as annotation and citing evidence.

**Finding 2: Teachers’ instructional practices were influenced by the Smarter Balanced accountability**

The Smarter Balanced assessment had a great influence on the instructional practices of teachers. The theme *internal accountability linked to external accountability* was supported by the student achievement data, which showed a significant increase from 2014-2015 to 2015-2016 for the class of 2021 cohort. After the 2014-2015 administration, the scores were the lowest in the district reference group. This comparison to neighboring districts created pressure and a sense of urgency in the district to improve scores. The following year’s increase stemmed from an increase in administrative presence in the building, an increase in professional development for all teachers around effective instructional practices, and changes made by teachers in their instruction to expose students to content at a more rigorous level. The teacher evaluation plan was revised however, the teachers did not express that this new plan was a major focus of their current work. The Smarter Balanced assessment is not tied to any evaluative measure; teachers have been most impacted by this policy initiative. Although the student achievement data was not used as part of the teacher evaluation plan, teachers felt pressure from the administration and broader community to increase test scores.

**Research question 2.** The second research question was: How do teachers perceive their instructional self-efficacy since the implementation of RTTT initiatives?

**Finding 3: Teachers self-efficacy has been impacted in preparing for the Smarter Balanced Assessment**
Teachers had a range of emotions, including feelings of stress, guilt, pride, and pressure. Teachers expressed feelings of guilt when it came to preparing students for the Smarter Balanced assessment. They acknowledged that the questions they were providing students were of good caliber, ones that strengthened the students’ critical thinking skills. However, they felt guilty that the reason for implementing the questions was due to the looming Smarter Balanced assessment. Teachers justified the embedding of Smarter Balanced style questions as essential skills that the students need to develop, regardless of the test. While the English and social studies teachers repeatedly mentioned embedding the skills and practices into the curriculum, one teacher admitted doing specific test preparation on a regular basis without embedding the material into the content. The mathematics teacher also acknowledged other work that was done around reading and writing, in addition to developing increased curriculum rigor in her discipline.

**Finding 4: Regardless of level of self-efficacy, teachers feel an increase in stress**

The one common emotion that all participants felt was stress. Teachers felt stress preparing students for the assessment, stress following the curriculum, and stress administering the Smarter Balanced test. The school administration prepared teachers on the content and instructional practices through professional development. There was little indication from the professional development data, student achievement data, or the self-efficacy survey that all focus group teachers would be affected by stress. For example, the teacher with the highest self-efficacy, Participant 1, felt that the new standards were not much different than what was taught. This teacher had self-efficacy survey results that were above average. However, this teacher did express feelings of stress and pressure, especially when dealing with the online test, which was outside her locus of control. The teacher most significantly affected by stress was the teacher with the lowest self-efficacy, Participant 3. Participant 3 shared that his classroom activities
aligned with the standards and standards-based assessment, yet also expressed frustration with the need to increase test scores. In his perception, the “Race to the Top” became a horse race that did not consider the horse’s preferences. He shared that he was under a lot of stress and did not like the feeling. This analogy was readily translated to a teacher who was expected to prepare students for a rigorous assessment, aligned to new standards regardless of whether the teacher wanted to prepare for that test or align to those standards.

**Finding 5: Strong teacher self-efficacy supported a shift in instructional practices to develop student learning habits**

Teachers felt the need to support their students and to help them develop habits of perseverance and patience. They chose activities to help the students become engaged in the content and provided students with support and motivation. Teachers shared that they did not assign as much homework to students during the testing window. The window also included a change to the daily schedule to accommodate testing. Although teachers tried to alleviate student stress, these changes caused additional stressors for the teachers, who now had to find a way to address the curriculum within those limitations.

The teachers consistently used language that aligned with the professional development they had received. Teachers discussed the implementation of reading and writing throughout the disciplines, which was the district goal. This district goal was reiterated in the professional development sessions. Another notable finding was the impact the new standards-based assessment had on the teachers’ instructional practice. The results from the Smarter Balanced assessment appeared to shift the instructional practices and beliefs of the teachers in a shorter period of time that what had been documented for the Connecticut Core Standards.
Conclusion

The purpose of this case study was to understand how teachers have experienced Race to the Top policy initiatives. The site for this case study was two middle schools in southwestern Connecticut. Data sets collected from this site included professional development documents, student achievement data, and a teacher self-efficacy survey. The primary data set was a focus group of four middle school teachers.

The data collected was analyzed with the intention to answer two research questions: 1) How do teachers perceive their instructional practices have been affected since the implementation of Race to the Top (RTTT) curriculum and assessment initiatives? 2) How do teachers perceive their instructional self-efficacy since the implementation of RTTT initiatives? The analysis led to five findings:

1. Teachers were provided with resources that enabled them to implement instructional changes.
2. Teachers’ instructional practices were influenced by the Smarter Balanced accountability.
3. Teachers’ self-efficacy has been impacted in preparing for the Smarter Balanced Assessment.
4. Regardless of level of self-efficacy, teachers feel an increase in stress.
5. Strong teacher self-efficacy supported a shift in instructional practices to develop student learning habits.

The findings were consistent with the theoretical framework. The theoretical framework included components of educational change and self-efficacy theories that were represented in the findings. Educational change (Fullan 2007) components that were revealed during this study included building internal capacity, using positive pressure and support, changes in curriculum
materials, teaching practices, and beliefs about curriculum. Additionally, teachers’ self-efficacy was impacted by the Smarter Balanced assessment. The change process implementation attempted to preserve self-efficacy. Teachers were included in the change process through engaging professional learning. This allowed teachers voices to be heard throughout the development of curriculum, the selection of materials, and the implementation of content.

Chapter Five includes an exploration of each finding in depth as well as the implications of these findings. The relation of the findings to the theoretical framework, literature, future research, and educational practice are examined.
Chapter 5: Discussion of Findings

This chapter summarizes the findings in relation to the theoretical framework, as well as the implications of those findings for the literature, future research, and educational practice. The researcher gathered information using student achievement data, a review of professional development documents, a self-efficacy survey, and a focus group interview. The primary data set for this summary is the focus group interview. The review of student achievement data, a review of professional development documents, and a self-efficacy survey were used to inform the primary data source. This study added to existing research by providing insight into teachers’ lived experiences and perceptions of their instruction. Data gathered through the professional development documents, the self-efficacy survey data, student achievement data, and focus group interview provided answers to the following questions:

1. How do teachers perceive their instructional practices have been affected since the implementation of Race to the Top (RTTT) curriculum and assessment initiatives?
2. How do teachers perceive their instructional self-efficacy since the implementation of RTTT initiatives?

The comprehensive review of data revealed eight key themes: *Internal accountability linked to external accountability, Develop internal capacity, Changes were made in materials, Changes were made in practices and beliefs, Build public confidence, School leaders use social persuasion, Teachers experienced stress,* and *Teachers have strong self-efficacy*. These themes emerged from a linear logic model. Professional development documents were collected, assessment data was collected, and the self-efficacy survey was administered. Each of the three data sets was analyzed. Results from these data sets informed the focus group and provided context for the teachers’ responses. The data was then triangulated to determine outcomes.
Several findings emerged from the eight themes. Each finding is explored in more detail in the following section.

**Findings**

Five findings were derived through analysis of the data sets. The components of successful educational change and support for teacher self-efficacy were embedded in the district’s policy implementation. This enabled teachers to implement educational practices that shifted instructional practices and beliefs in order to support student mastery of content. The data collected, which included professional development documentation, self-efficacy survey data, and focus group data, revealed the following findings:

1. Teachers were provided with resources that enabled them to implement instructional changes.
2. Teachers’ instructional practices were influenced by the Smarter Balanced accountability.
3. Teachers’ self-efficacy has been impacted in preparing for the Smarter Balanced Assessment.
4. Regardless of level of self-efficacy, teachers feel an increase in stress.
5. Strong teacher self-efficacy supported a shift in instructional practices to develop student learning habits.

In the remainder of this section, each finding will be explored in depth.

**Finding 1: Teachers were provided with resources that enabled them to implement instructional changes.** One potential barrier to implementing instructional change could be a lack of resources. This district had the financial means to provide teachers with the resources necessary to support curricular and instructional change. The teachers were provided with multiple types of resources, which allowed them to make adjustments to instruction. In addition
to resources and materials, teachers were supported with many forms of professional
development throughout the year. Investments were also made in curriculum writing, having
teachers write and revise curriculum documents so these aligned with the Connecticut Core
Standards (CCS) and the Smarter Balanced assessment.

The district provided technology such as iReady computer-based assessments and
Chromebooks for classrooms. Teachers were able to use the data collected through these tools to
provide students with feedback. Teachers shared their experiences providing students with
feedback in a Google document and using the iReady assessment to assess where students may
have gaps in their learning. Using “assessment for learning” allows the student to engage in the

Pedagogical changes such as improvement of questioning, providing feedback, using peer to peer
discourse has a significant effect on student learning (Fullan, 2007).

Providing professional learning for teachers is one of the tenets of educational change.
The focus of the professional development sessions were on literacy for teachers in all
disciplines. In addition, the mathematics department received support in the area of mathematics
instructional strategies. The focus of the district PD on literacy and mathematics is one of the
facets of educational change theory: attend to the basics of student learning: literacy,
mathematics, and well-being of students (Fullan, 2007). In the focus group, teachers shared their
efforts in supporting students’ well-being in how they expressed empathy with students and the
consideration of student stress through accommodations of less homework during the testing
window. Teachers in the focus group shared that they were implementing strategies around
student engagement, providing students with opportunities to explain their thinking as well as
providing them feedback through Google documents.
Select groups of mathematics and ELA teachers had the opportunity to observe instruction at the high school, allowing them to see instructional practices with their former students. Fullan (2007) described the importance of continuously developing teacher capacity. Capacity building, when developed collectively, contributes to motivation. Providing teacher training can also decrease feelings of frustration (Schmidt & Datnow, 2005). When teachers are given opportunities to develop their capacity and see that the new strategies are successful, it provides teachers with mastery experiences for them to build upon (Borko et al., 2003).

Experiences that allow teachers to master the practice or see how others master practices help to develop and support teacher self-efficacy (Bandura, 1977, 1994, 1997b; McCormick & Ayres, 2009).

Each department was given time during which they were released from the school day to work as a grade-level departmental team. These teams would spend part of a school day working collaboratively on curriculum implementation with a focus on the instructional strategies learned during PD. A key component for successful change includes gathering people with the appropriate skills together to work on problems (Fullan, 2007). Ongoing, authentic collaboration can result in pedagogical change (Bruce et al., 2010). By providing time for collaboration across among the schools shifts a culture from an autonomous one to one with greater consistency of effective teaching practices (Fullan, 2007, p. 56).

All these initiatives required the district to provide time for the teachers to do this work. School-day release time to observe classes or work collaboratively required the district to commit to paying for substitutes. Building leaders had to relinquish faculty or department meeting time so the teachers could receive professional development. A lack of time provided to teachers has been a documented stressor for teachers (Berryhill et al., 2009; Hamilton et al.,
therefore providing time for teachers may decrease teacher stress. Time and financial resources were essential for these initiatives to happen. The district supported the purchase of resources aligned with the Smarter Balanced assessment, including books and online resources. The resources provided allowed teachers to focus on instruction without worrying about whether they would have the resources needed to implement the instruction Fullan (2007) described the effect of removing excuses that are barriers to educational change. When excuses are removed there is no reason to not be successful (Fullan, 2007, p. 61). The district proactively provided resources, allowing teachers to focus on the changes that needed to be made instead of on why the changes could not happen. By allowing the teachers access to updated technology, curriculum, and classroom materials, the district removed barriers to change implementation which helped teachers shift their focus to how they could implement change in their classrooms.

**Finding 2: Teachers’ instructional practices were influenced by the Smarter Balanced accountability.** The teachers were heavily influenced by the standards-based assessment. Fullan (2007) contended that accountability measures should be used as a way to drive student learning forward. Teachers felt confident in their knowledge of the content and came to believe that the content and skills taught were necessary for student success beyond the Smarter Balanced assessment.

The inclusion of standards-based assessment results in the teachers’ evaluations could have had negative consequences on teachers’ wellbeing and student learning (Callahan & Sadeghi, 2015; Saeki, Pendergast, Segool, & Embse, 2015). Doherty & Jacobs (2013) note that states need to be flexible with the implementation of an evaluation plan. Connecticut did separate Smarter Balanced assessment from evaluation. This separation may have decreased the influence of the evaluation plan on the other policy initiatives. Professional development documentation
was devoid of any mention of the evaluation plan. The participants shared that the evaluation plan was developed amicably with the administration and the administration was flexible with the process. The evaluation plan did not appear to be a source of stress or discomfort for the teachers, nor did it appear to influence their instructional practices.

The professional development data included mentions of the CCS. Participants shared the effect of CCS implementation with the broader community, and community members pushed back on the Common Core. It appeared that the community was not aware that the CCS and the Smarter Balanced assessment were two separate things. In the focus group, teachers also referenced the two at the same time, saying they were implementing the “Common Core/SBAC.” Although teachers felt relief that the standards-based assessment results would not be tied to teacher evaluation, the influence of the assessment was felt through school and community pressure. This is in alignment with (Darling-Hammond, 2004b) who described the professional accountability, market accountability, bureaucratic accountability and political accountability that exists in the field of education. Public perception of school quality is linked to achievement on standards-based assessments and create pressures on schools (Jacobsen et al., 2013). The overlap between the CCS and the Smarter Balanced assessment suggests that the implementation of the CCS was driven by assessments of the implementation of the Smarter Balanced test standards.

In Connecticut, the standards were implemented in 2010, with district curriculum adopted soon after. McCormick and Ayers (2009) suggested modifying curriculum before the implementation of high-stakes testing. Desimone (2013) suggested that instructional changes occur when there are curriculum changes. The Smarter Balanced assessment was first administered in 2015. The implementation of the Smarter Balanced assessment and its results
drove revisions to curricular documents, providing realignment to the CCS along with inclusion of the Smarter Balanced assessment question types. The alignment of the CCS and the Smarter Balanced assessment was evident in professional development documents that referenced the standards as well as the assessment. The documents also included Smarter Balanced sample problems and scoring guides. Participants referred to the Smarter Balanced assessment more often than the CCS.

After receiving the results of the Smarter Balanced assessment in 2015, teachers across the district received professional development that focused on reading and writing. Fullan (2007) stated that successful change occurs when internal accountability is linked to external accountability, in other words “situations where individual responsibility, collective expectations, and accountability data within the school are aligned” (p. 60). When the scores increased, the teachers felt validated for the work they have been doing. Focus group data suggested that the teachers felt individually and collectively responsible for preparing for the assessment.

The Smarter Balanced assessment accountability measure was a driving force behind many of the instructional decisions. Teachers shared that they could not prepare for the Smarter Balanced assessment like they did for the previous CMT. Previous researchers documented teachers spending up to a month preparing for an accountability test (Hamilton et al., 2007) through the gamification of the exam or compliant practice instead not focused on higher quality teaching or learning (Goodson, Moore, & Hargreaves, 2006b; Murnane & Papay, 2010). Test preparation still exists with the Smarter Balanced assessment. Teachers shared that they are incorporating the form of the questions into their lesson, familiarizing students with test format and test question style which was similar to previous work documented in Hamilton et al.,
(2007). Similar to Brown (2015), teachers still feel pressured to cover material in time for the test and to keep up with pacing and/or curriculum guides. When planning instruction, teachers shared that they always kept in mind the relationship of the material to the Smarter Balanced assessment. Teachers embedded Smarter Balanced-style questions into their lessons.

As a result of this professional learning, teachers looked for materials that were at a higher Lexile level and provided students with more rigorous materials. Teachers in this district had access to new and more rigorous materials, so access to resources was not a barrier to implementing curricular changes. With the Smarter Balanced Test being administered online, teachers included more technology into their lessons. In addition to adopting new technology and curricular resources, teachers were involved in curriculum writing and aligning the curriculum with the new standards and the Smarter Balanced assessment.

Finding 3: Teachers’ self-efficacy has been impacted in preparing for the Smarter Balanced Assessment. The commingling of the new standards and assessment created an environment where teachers felt conflicted about test preparation. Prior researchers cautioned that high-stakes testing environments can cause teachers to shift their practices toward preparing for the test, hoping to increase scores, rather than providing opportunities for student mastery of content (Diamond, 2012; Smith & O’Day, 1990). Teachers may thus become more rigid in their instruction, and less autonomous (Bengtson & Connors, 2014). In this district, teachers shared the responsibility for preparing students for the Smarter Balanced test, as well as the guilt of preparing them for the test. The teachers in the focus group had engaged in test preparation for the Connecticut Mastery Test, using released questions to prepare students. Their beliefs about test preparation have shifted with the new assessment. Participants realized that they needed to prepare students for the test because of societal pressures and also acknowledged the value of the
skills being taught. Teachers realized that preparation for the Smarter Balanced assessment requires them to provide students with opportunities to master content and develop skills that had applications beyond the single test.

Efficacy is strengthened by social persuasion and teachers may initiate tasks due to social persuasion (Bandura, 1977, 1994, 1997b). Participants’ self-efficacy scale scores were average to above average. The researcher posits that any participant whose self-efficacy was lower prior to the implementation of the changes was brought up to the average to above average level. For any participant whose self-efficacy was higher prior to the implementation of the changes, the scores did not diminish lower than average. In this case, teachers were preparing students for the assessment due to the societal expectations; they are also teaching the skills needed due to the strength of their professional identity. Teachers with strong self-efficacy are more willing to implement curricular and instructional changes (Cerit, 2013b). Since the teachers expressed efforts in making instructional changes, the researcher suggests that any professional learning and support that was provided to the teachers during the implementation of the changes supported or maintained teachers’ self-efficacy to satisfactory levels. In examination of the type of professional learning that was provided, it is in line with the proposed sources of self-efficacy theorized by Bandura (1997). Any feelings of doubt regarding the implementation of the CT Core Standards and the Smarter Balanced test were mitigated through the experiential success on the assessments, vicarious experiences of watching others, professional learning time where teachers can collaborate with peers providing a greater sense of control, and the positive feedback that the teachers received. Teachers no longer wanted to prepare students for the test for its own sake; they adequately want to prepare students for lifelong learning.
The participants felt rigidity having to closely follow a curriculum and pacing guide, as anticipated by Bengtson and Connors (2014). However, this was at the expense of less academically focused endeavors. The teachers were now finding new ways to engage students with the content. They were now teaching in an environment that had changed from when they first started teaching. This resulted in teachers feeling conflicted about their work. They missed the lighter activities and the autonomy that existed before, yet understood the focus on preparing students for academic success through close alignment to the curriculum. This created a shift in their instruction that is supported by an increase in self-efficacy. When teacher self-efficacy is strengthened, teachers provide students with more opportunities to master content and more time on tasks with a greater academic focus (S. Gibson & Dembo, 1984).

**Finding 4: Regardless of level of self-efficacy, teachers feel an increase in stress.**

Results from the Smarter Balanced assessment were examined by school and district leadership. Student performance was compared between the two middle schools in the district and also compared to schools in the broader District Reference Group (DRG) and the state. Teachers believed that the achievement data may have been analyzed to include comparisons of teachers. Teachers felt pressure to keep up with the changes in standards and testing. Teachers shared that they wanted to teach students the skills they need to be successful. External pressure was applied by the presence of administrators as they conducted walk-throughs of classrooms, by the community conversations about test results, and by the district goals. The increased presence of administrators communicated the emphasis on increasing test scores.

Teachers felt an increase in stress due to new standards and the new assessment. There was now a culture of pressure in the district. The teachers felt they had less autonomy and flexibility because they must keep up with the curriculum and pacing guides. This alignment
created a culture in which teachers felt the need to race to an invisible finish line. They mentioned a lack of time to breathe or engage in nonacademic activities. These negative reactions suggested that some of the participants may not be prepared to work at an increased pace and expectation level due to beliefs about their own efficacy. From the self-efficacy survey, it was evident that teachers with higher self-efficacy expressed less discomfort with the changes. However, in the focus group, all members expressed feelings of stress. As in (Saeki et al., 2015), the case study participants in this study mourned the loss of being able to engage students in “fun” teaching activities. In this study, teachers feel they do not have time for the light hearted activities anymore and it is making them more stressed, similar to the elementary school teachers in research done by Saeki et al. (2015).

The teachers felt collective responsibility for preparing students, mentioning the importance of their colleagues in helping them mediate feelings of stress. Mediating feelings of stress supports self-efficacy (Bandura, 1997b). The increase in feelings of stress is validated by previous research. Fullan (2007) described teachers being under stress due to high-stakes testing and accountability measures. Although the Smarter Balanced Test is no longer related to teacher evaluation, the community pressure to achieve is still present. The district and building administration communicated the expectation to increase student achievement both verbally and nonverbally. Teachers were expected to participate in professional learning, align lessons to the curriculum, and implement changes. Inclusion of teachers in the professional development work signified that the district believed in the expertise of the teachers and their ability to implement the changes.

The biggest stressor for the participants was the implementation of a computer-based test. Teachers felt a lack of control over the new assessment. There were changing guidelines for the
test and changing directions from the Connecticut Department of Education staff. New accountability examinations have historically caused anxiety for teachers (Seashore Louis et al., 2005). It was difficult for teachers to feel that they adequately prepared students for the test due to the changes in what was being assessed. In addition, having a computer-based test increased the number of variables in the testing environment. No longer were teachers and students dealing with papers and pencils. They now had to address Wi-Fi concerns, technological glitches, and students being able to navigate an online testing environment. Teachers had to prepare students for the content being tested and how to access the technology appropriately so that students could demonstrate content knowledge. Although the district was now approaching its fourth administration of the Smarter Balanced assessment, the participants still mentioned the testing window as a source of stress.

The district tried to minimize the stress teachers felt by providing them with professional development on the Smarter Balanced assessment. Teachers were given time to practice question types and examine grading rubrics. Teachers are afraid their students may not achieve the expected levels, which may reflect negatively on perceptions of their instructional ability (Cawelti, 2006; Seashore Louis et al., 2005). Despite efforts, there may always be a component of stress with regard to a state accountability assessment.

**Finding 5: Strong teacher self-efficacy supported a shift in instructional practices to develop student learning habits.** Teachers shared that they helped students develop reading, writing, and mathematics skills in all disciplines. This shifted the onus of educating students in the identified skills to all teachers. Before the policy initiatives, teachers would engage students in discipline-specific test preparation. The teachers recognized that the curricular changes increased the difficulty of content for students. The test also required students to sustain their
attention and focus for a long period of time. Realizing that students needed to develop perseverance with regard to the test and its content, teachers were cognizant of the need to develop student learning habits.

In addition to content changes, teachers shared that they began teaching students learning habits such as perseverance and patience. Teachers found themselves encouraging students to engage with the material for longer periods of time. They also supported students by providing them with a variety of materials and activities designed to help develop flexibility in their thinking. Students became engaged in more academic learning, with teachers aligning their instruction to the written curriculum. These practices indicated that the teachers had strong instructional efficacy, as defined by Gibson and Dembo (1984), who described it as providing students with more time on tasks with academic focus and adjusting instruction based on feedback from assessments (Bandura, 1993).

The five findings in this study build on the literature regarding educational change and teacher self-efficacy during implementation of accountability measures. This district provided teachers with professional learning, resources, and time to implement changes. Lack of resources and time have been documented as sources of stress for teachers (Berryhill et al., 2009; Hamilton et al., 2007; Seashore Louis et al., 2005; Skaalvik & Skaalvik, 2011). Providing teachers with positive pressure, sufficient resources, professional learning, and opportunities to collaborate with colleagues are hallmarks of successful educational change (Fullan, 2007).

In this case study, the researcher determined that the educational changes implemented through actions directly supported teacher self-efficacy. Teachers were given opportunities to engage in professional learning activities that develop their capacity. This was done through the three of the four major psychological processes that support self-efficacy (Bandura, 1993b). First
were experiential and vicarious learning experiences where teachers practiced instructional strategies during PD and observed best practices for instruction. Teachers received encouragement, which came in the forms of verbal support and social persuasion. Teachers did experience stress, which was not directly supported in the professional learning documents that were analyzed. Although teachers experienced stress due to the standards-based accountability measure, this was a source of stress that has been in schools since the implementation of the No Child Left Behind Act of 2001, where schools had to report on the success of their students on an annual basis. The detachment of the Smarter Balanced assessment results from the teacher evaluation plan decreased the stakes for teachers in implementing instructional changes. This provided teachers with a safer environment in which they could try out new materials and curricular ideas. These findings add to the literature regarding the complex relationships standards-based accountability measures have on teaching and learning.

**Implications of Findings**

This section focuses on the implications of the case study findings on theories of educational change and self-efficacy, contributions of the findings to scholarly literature, implications of the findings for future research, and how the findings may affect educational practice.

**Implications of findings on the theoretical framework.** In this study the researcher used a theoretical framework consisting of educational change theory and self-efficacy theory. Utilizing this framework allowed the researcher to consider the components of educational change that are influenced by self-efficacy theory. Fullan (2007) said a reform is successful if teachers change their instructional practices. A shift in instructional practices requires observed changes in curriculum, materials, and understandings about curriculum and learning practices
In this study, the researcher examined how teachers perceived their instructional practices during the implementation of Race to the Top policy. For this district, the changes implemented resulted in an increase in student achievement.

This case study supports the work previously done in educational change (Fullan, 2007) and self-efficacy (Bandura, 1997). This research is reinforced by components of educational change theory (Fullan 2007). Successful educational change includes observed changes in (a) curriculum materials, (b) teaching practices, and (c) beliefs or understandings about the curriculum and learning practices (Fullan, 2007, p. 85). In this district, there were changes in curriculum and materials with the CCS and Smarter Balanced assessment. These changes were done collaboratively by teachers. There were changes in instructional practices as teachers shared their efforts to include student voice through written work and peer to peer discourse. Changes in beliefs and understandings also shifted as teachers saw their responsibility to prepare for the standards-based assessment as a component that is embedded in a curriculum that prepares students with the necessary skills for future success.

The researcher used selected components of educational change theory that were influenced by self-efficacy. Fullan (2007) identified ten key elements of successful change. The first key element of successful change is to “define closing the gap as the overarching goal” (p. 44). During the initial implementation of the policy initiatives, this district focused on increased rigor and implementation of appropriate instructional practices for all students. It was evident in the self-efficacy survey data that the teachers need further support on differentiation and supporting struggling learners. However, this researcher contends that those items cannot be addressed until the capacity of the teachers has been developed in the “three basics” identified by Fullan (2007): literacy, mathematics, and well-being of students (p. 45). The district in this case...
study did not identify closing achievement gaps as the primary goal, yet there was instructional change and improvement in student achievement. Since this case study is of short duration, next steps may be for the researcher to delve deeper into the subgroups and examine how districts target groups for improvement.

In this case study, the reforms were originally delivered from the State of Connecticut down to the districts and schools. When there is a top-down imitative it is less likely to be implemented effectively (Elmore, 1980). This was evident in the teachers in the focus group sharing their negative experiences with the initial implementation from the Connecticut State Department of Education. Unclear and changing communication regarding the policy changes, is a known problem when implementing change (Fullan, 2007). Although the intention may be to communicate clearly, when information is disseminated downward through a top-down initiative, it is dependent on those below to accurately communicate as well. The policymakers at the top are dependent on the implementers (teachers, community members, students) at the bottom (Elmore, 1980).

Once the Smarter Balanced results were provided to the schools, teachers and district administration recognized that changes needed to be made in instruction. The district administration clearly communicated, through the district goals, its expectation that there needed to be a change in student learning. During the focus group, teachers shared that the district filled the communication gap between the CT State Department of Education and the community. Clear communication and a system for communication exists in schools that have successful reforms (Borko et al., 2003). The clarity and communication of implementation of educational changes is related to developing capacity is a key element of successful change and can decrease anxiety and frustration (Fullan, 2007) and increase efficacy (Bandura, 1997). Clear
communication provides teachers a greater understanding of the challenges ahead developing teacher efficacy as they visualize success (Bandura, 1993b).

Changes that were implemented in this district were in alignment with the theoretical framework components of educational change (Fullan, 2007) and self-efficacy (Bandura, 1997). The intersectionality of supporting teacher efficacy during educational change provides context for how changes can influence teachers’ instructional practices and implementation in the classroom.

**Implications of findings for the literature.** This case study added to the scholarly literature on the implementation of the Common Core State Standards and the Smarter Balanced assessment. A significant finding is that teachers were conflicted about preparing for the Smarter Balanced assessment. Previous researchers (Buchanan, 2015; Cawelti, 2006; Diamond, 2012) found that teachers may focus on teaching to the test. Desimone (2013) found that school staff believed that it was important to focus where the test would focus. Incorporating test questions into the curriculum is not new, as documented by Hamilton, Stretcher, Marsh, McCombs, and Robyn (2007), who observed teachers incorporating test style, strategies, and format to prepare for the test. Historically, teachers felt pressured to focus on test preparation, regardless of whether it provided students with transferable skills (Murnane & Papay, 2010). In this case study, participants shared that they felt conflicted about preparing students for the Smarter Balanced assessment because they knew they were teaching students transferable skills that were also assessed on the test. This alignment of instructional practice, standards, and assessment created an environment where teachers had to shift beliefs and habits. Teachers were embarrassed to say they engaged in test preparation, as that had the negative connotations of not being high-quality teaching (Murnane & Papay, 2010) or not focusing on student needs (Cawleti,
In this case study, the teachers were providing students with high quality instruction that was focused on student needs and was aligned with the assessment. This should have made the teachers’ work easier, but instead it resulted in teachers feeling guilty. Educational change requires a “disequilibrium” to teachers current practices (Wheatley, 2002, p. 9) and the need to resolve the conflict is a catalyst for change.

There has been documentation that teachers do not understand that the CCS is a set of content standards (Bengston & Connors, 2014; Papola-Ellis, 2014). Due to the professional development that was provided to the teachers in this district, it was clear that the teachers were aware of the distinctions among standards, curriculum, and standards-based assessment. Papola-Ellis (2014) documented teachers implementing strategies that did not align with best practices, devaluing their own experiences. Schmidt and Datnow (2005) suggested that districts invest in teacher training to decrease teacher frustration. This case study documented that the district’s investment in teacher professional learning and collaboration developed teacher confidence and knowledge regarding the initiatives.

In a research review, Saeki et al., (2015) suggested future research should examine educational accountability practices and the relationship to student achievement outcomes. They specifically suggest researchers may want to examine the relationship between teacher stress and instructional practices. This case study contributes to the literature in that the researcher examined the accountability practice of the CT Core Standards adoption and the standards-based assessment, the Smarter Balanced assessment. The initial results of the Smarter Balanced assessment in 2015 were lower than this district had previously performed on state accountability assessments. Once the student achievement data was obtained, the district made investments in the professional learning, materials, and support provided to teachers. This would suggest that
the accountability initiatives alone do not shift student achievement but are the results of financial investments made. Elmore (1980) described this as an “organizational responsibility” which contributes to a success of a policy (pg. 14). Furthermore, adequate time and resources are needed for teachers for successful policy implementation, providing support by the “top” to those implementing changes at the “bottom” (Elmore, 1980). As shown in this case study, policies need an investment by the implementers to affect meaningful change.

Implications of findings for research. This case study contained five key findings. Future research would build from these five findings, allowing future researchers to examine the implementation of RTTT policy through a variety of lenses. The first implication would be to examine the impact the evaluation plan has had on teachers’ instructional practice. Based on this study, the teachers were not influenced by the evaluation plan in this district. In Connecticut, school districts can adopt the SEED model or they can develop their own model of evaluation and submit it to the CT State Department of Education for approval. In this district, the SEED model was a starting point of the evaluation plan and the district adopted a model of evaluation that they developed. Future research could examine the Connecticut SEED model specifically for its influence on teachers’ instructional practices. Previous research by Saeki et al. (2015) documented that an evaluation plan which was implemented in Louisiana was having unintended consequences with effective teachers departing their schools or professions.

A second implication for research would be to explore whether the teachers have had shifts in instructional practice at the high school level. In the middle school, teachers and students experience the Smarter Balanced assessment every year. One finding in this case study was the influence the Smarter Balanced assessment had on teachers’ instructional practices. In Connecticut, at the high school level, the Smarter Balanced assessment was removed and
replaced with a School Day SAT. The new SAT is aligned to the CT Core Standards and the School Day SAT serves as the state accountability assessment. Since the assessment is only given in Grade 11, future researchers could consider whether this assessment is having an impact on teachers’ instruction in meaningful ways. Additionally, researchers could consider the impact the other RTTT accountability measures may be having on high school teachers’ instructional practices.

A third implication for research would be to examine the mediating factors in teacher stress. In this case study, the researcher acknowledged the influence a collaborative, professional learning culture may have on teacher stress levels. Research has documented teacher stress for decades (Elmore, 1980; Ford et al., 2015; Saeki et al., 2015; Schwarzer & Hallum, 2008) and it is not isolated to this Connecticut school district, but has been shown in other parts of the world (Cerit, 2013b). Future researchers could examine this in more detail, delving deeper into the types of collaborations that may be most meaningful to mitigate teacher stress during the implementation of educational change.

**Implications of findings for practice.** The instructional shifts at the middle school in this district occurred in an environment that included: consistent, aligned professional development, resources to support changes, time to collaborate, and annual student assessments. For districts staff who want to help their teachers increase student performance, the supports provided were essential.

In addition to providing support for developing teacher capacity, the structure of the Smarter Balanced assessment forced teachers to let go of traditional test preparation. The questions from the previously administered CMT assessment were released each year, giving teachers a bank of questions that they could use to prepare students. Smarter Balanced
assessment questions are not released. Teachers cannot rely on the assessment questions to prepare students; instead, they use documentation about the types of questions asked, the skills needed, and the standards that the test is based on. This has shifted instruction from traditional test preparation, providing students with previously released test questions, to test preparation that is embedded in the curriculum. The participants recognized that they engaged students in preparation for the assessment; however, the content being taught was what the staff valued. By not having prior questions, preparing students for the exam required teachers to understand and apply the appropriate level of rigor throughout the year, raising the capacity of all students. The findings in this case study support the key element of educational change (Fullan, 2001), teachers need to be knowledgeable about the curriculum and materials being developed and utilized.

Teacher voice in the implementation process can support teacher efficacy and guide successful implementation of change. This district included teachers in the change process. Previous literature regarding successful educational reforms documented the importance of school administration supporting and acknowledging teachers’ professionalism (Sheldon & Biddle, 1998). Ha, Wong, Sum, & Chan (2008) stated that viable educational change occurs when all stakeholders are involved. The participants in this case study had confidence in their knowledge of the standards, the standards-based assessment, and the instructional strategies and content that students needed to know. Allowing teachers to write and revise curriculum, to select instructional materials, and to collaborate acknowledges their expertise, which supports teacher self-efficacy.
Conclusion

Policy implementation is a top down effort. Supporting the work done by teachers who are responsible for implementing policy is essential. Regardless of how policy is communicated at the state and federal level, the act of engaging in regular dialogue with staff that is aligned to school and district goals will fortify any changes. As seen in this case study, school and district staff communication with the community regarding changes can fill gaps or misconceptions regarding new initiatives.

In this case study the researcher examined one district’s approach to implementing policy to understand the perspectives of teachers experiencing policy change. The researcher cautions future researchers to consider the context of this study. The district in this case was a highly effective, large suburban school district in southwestern Connecticut. The participants in this case were four certified and experienced middle school teachers who taught at the middle schools in the district. The participants in this study were all volunteers and the researcher of this study was limited by the lack of staff who volunteered to participate in this study in the selected district. The findings are limited by the quantity of participants in the self-efficacy survey and focus group. Future research would include expanding the self-efficacy survey to the entire teaching staff of the middle schools. Using the survey data, the researcher would select and administer focus group interviews to as many as ten participants. The proposed expansion of this study would strengthen the trustworthiness of the data results and findings. Therefore, the transferability of the findings of this study are limited by the small sample size of participants taking the survey and focus group. Transferability is also limited to districts similar to the district in this case, a district with a history of high performance on state accountability measures,
districts with a low percentage of students receiving free/reduced lunch, and districts with the financial stability and resources to support curriculum, teaching, and learning.

As described in the theoretical framework which includes educational change (Fullan, 2007) and self-efficacy (Bandura, 1997b), the results from this study support the inclusion of teachers’ expertise and professionalism when implementing educational changes. Although teachers experienced stress during the implementation of this change, this did not dissuade them from implementing instructional practices that would improve student achievement.

This district in the first administration of the Smarter Balanced assessment had the lowest student achievement scores in their reference group. Through a comprehensive initiative, the district student achievement scores had the largest percentage increase in the reference group and the fourth largest in the state. The steps the district staff initiated have components that may be of interest to similar districts.

In this district, teachers were provided with educational opportunities to develop their own capacity. By developing teacher capacity, teachers can then effectively implement the changes to their colleagues, students and their families. Including staff in the change process was essential to this district’s policy implementation. The support shown by the district in this case study included investments in professional development, curriculum writing, new materials, and time for teachers to collaborate on curriculum and instruction. Each initiative included teacher participation whether during curriculum writing, the selection of materials, or implementation of best practices. The inclusion of teachers in the change process supported teacher self-efficacy, providing the teachers with a sense of control over their environment. The inclusion of teachers in the policy implementation supported their professionalism, allowing them to make instructional shifts that supported student learning and growth.
References


Appendices

Appendix A: Access Letter to Superintendent

Dear (Superintendent);

I am a doctoral candidate in the College of Professional Studies at Northeastern University. As part of my dissertation research, I am conducting a study on how teachers have experienced changes in education due to new policy initiatives around standards, assessment, and evaluation in your district. I am requesting permission to utilize your district as the research site for the case study, with selected staff at the middle schools in your district as participants.

I am seeking permission to collect documents that were utilized for professional development around standards, assessment, and evaluation. Results from the Smarter Balanced Assessment and the Connecticut Mastery Test from 2012-present will also be collected from the Connecticut Department of Education and analyzed. With approval, I will seek volunteer participants from the school staff using a screening tool. For the study, I am currently in search of teachers who meet the following criteria to participate in one sixty-minute focus group interview and a short survey about their self-efficacy:

1. Has taught since the 2012-2013 school year.
2. Is a member of a middle school team.
3. Currently teach students in Grade 6-8.

Enclosed, you will find a copy of the screening tool, a letter to staff regarding participation, and the consent for participation form.

Thank you for considering the use of your district as a research site.

Sincerely,

Jennifer Chirles
Chirles.j@husky.neu.edu

Encl: Screening Tool
Letter to Staff- Informed Consent
Consent for Participation Form
Appendix B: Access Letter to Building Principals

Dear (Principal);

I am a doctoral candidate in the College of Professional Studies at Northeastern University. As part of my dissertation research, I am conducting a study on how teachers have experienced changes in education due to new policy initiatives around standards, assessment, and evaluation in your district and school. I am requesting permission to utilize your school as the research site for the case study, with selected staff in your school as participants.

I am seeking permission to collect documents that were utilized for professional development around standards, assessment, and evaluation. Results from the Smarter Balanced Assessment and the Connecticut Mastery Test from 2012-present will also be collected from the Connecticut Department of Education and analyzed. With approval, I will seek volunteer participants from the school staff using a screening tool. For the study, I am currently in search of teachers who meet the following criteria to participate in one sixty-minute focus group interview and a short survey about their self-efficacy:

1. Has taught since the 2012-2013 school year.
2. Is a member of a middle school team.
3. Currently teach students in Grade 6-8.

Enclosed, you will find a copy of the screening tool, a letter to staff regarding participation, and the consent for participation form.

Thank you for considering the use of your school as a research site.

Sincerely,

Jennifer Chirles
Chirles.j@husky.neu.edu

Encl: Screening Tool
    Letter to Staff- Informed Consent
    Consent for Participation Form
Appendix C: Screening Tool

Teacher Participant Screening Tool

1. Name ______________________________
2. Do you currently teach Grade 6-8? Yes No
3. Subject ______________________________
4. Current Team __________________________
5. What year did you start teaching?________________________
6. Have you taught the same subject since 2012-2013 school year? Yes No
7. Have you taught middle school since 2012-2013 school year? Yes No
8. What grade levels have you taught since the 2012-2013 school year?
9. Have you prepared students for the Smarter Balanced Administration for ELA and/or Mathematics?
   Yes No
10. Have you prepared students for the CMT Science Administration?
    Yes No
11. Have you prepared students for the previous CMT ELA and/or Math Administration?
    Yes No
Appendix D: Signed Informed Consent Document

Date:

Dear (insert participant name),

I am a doctoral candidate in the College of Professional Studies at Northeastern University. As part of my dissertation research, I am conducting a study on how teachers have experienced changes in education due to new policy initiatives around standards, assessment, and evaluation in our district.

As part of this study, participants will be asked to complete a short rating scale of his/her experiences in the school setting. There will also be one focus group interview with other school district employees.

The interview will also be audio recorded. The interview will take place in a mutually agreed upon, comfortable location where we will have privacy. The focus group interview will take approximately sixty minutes. All information you share will be kept strictly confidential and will not be shared with anyone else. A pseudonym will be assigned to all participates, the school, and district. Your real name nor the school or district will not be used during the publication process.

Attached, you will find the Consent for Participation Form detailing the participant’s involvement. Please review this document and consider your participation. Prior to the start of the study, I will review the document with you. If you agree to participate, you will be asked to sign consent, prior to participation in the study. As a potential participant, please be aware that this is strictly voluntary and your participation in no way affects or influences your employment status or evaluation.

Again, thank you for considering participating. Again, this is strictly voluntary and at any point you may stop participating. However, the information and ideas you supply will aid in understanding how teachers experience policy changes to support teachers during future implementations.

If you have any questions, please feel free to contact me.

Sincerely,

Jennifer A. Chirles

Encl: Consent for Participation Form
Appendix E: Signed Informed Consent for Participation Form

Consent for Participation Form

Northeastern University, College of Professional Studies
Name of Investigator:

Principal Investigator: Margaret Dougherty, Ed.D.,

Student Investigator: Jennifer Chirles

Title of Project: A Case Study of Teachers’ Perceptions of Instruction and Self Efficacy as Impacted by Race to the Top Policy

Informed Consent to Participate in a Research Study

We are inviting you to take part in a research study. This form will tell you about the study, but the researcher will explain it to you first. You may ask this person any questions that you have. When you are ready to make a decision, you may tell the researcher if you want to participate or not. You do not have to participate if you do not want to. If you decide to participate, the researcher will ask you to sign this statement and will give you a copy to keep.

Why am I being asked to take part in this research study?
This study is to examine experiences of teachers. The researcher selected six teachers who met the following criteria:
1. Has taught since the 2012-2013 school year.
2. Is a member of a middle school team.
3. Has prepared students for the Connecticut Mastery Test ELA and/or Math and the Smarter Balanced Assessment
4. Has taught at the Grade 6-8 level.

Why is this research study being done?
The purpose of this study is to develop a better understanding of teachers’ perceptions of their instruction and selves as influenced by new standards, assessments, and evaluation plan.

What will I be asked to do?
If you decide to take part in this study, we will ask you to participate in one sixty-minute focus group interview and a short survey.

Where will this take place and how much of my time will it take?
The survey will be completed online; it should take no longer than 20 minutes. The focus group will be held in a mutually agreed upon location, not on school grounds. The focus group will last 60 minutes.

Will I benefit by being in this research?
There will be no direct benefit to you for taking part in the study. However, the information learned from this study may help other educators in implanting policy changes at the state, district, and school levels.

Who will see the information about me
Your part in this study will be confidential. Only the researchers on this study will see the information about you. No reports or publications will use information that can identify you in any way or any individual as being of this project.

Pseudonyms will be used for all participants, schools, and school district. Data collection of signed consent forms, documentation, audio, video, and notes of the focus group interview will be saved digitally in a Google Drive location. Each file will have an additional password, for security. To protect all participants, pseudonyms of the district, school, and the participants will be provided. All audio will be transcribed, coded, and de-identified. Access to transcribed data will be restricted to the researchers. Electronic files will be held on an online electronic storage database with password protection. After three years, all audio recordings, interview transcripts, and data with identifiable information will be destroyed. Hard copies of consent forms will be held for three years after completion of the study. All data will be destroyed using deletion of data.

In rare instances, authorized people may request to see research information about you and other people in this study. This is done only to be sure that the research is done properly. We would only permit people who are authorized by organizations such as the Northeastern University Institutional Review Board [or if applicable the sponsor or funding agency e.g. NIH, NSF, FDA, OHRP] to see this information.

**What will happen if I suffer any harm from this research?**
No special arrangements will be made for compensation or for payment for treatment solely because of any participation in this research.

**Can I stop my participation in this study?**
Please be aware that your participation is voluntary and refusal to participate will not result in any penalty. You do not have to participate if you do not want to and you can refuse to answer any question. Even if you begin the study, you may quit at any time. If you do not participate or if you decide to quit, you will not lose any rights or benefits, that you would otherwise have.

**Who can I contact if I have questions or problems?**
If you have any questions about this study, please feel free to contact Jennifer Chirles at Chirles.j@husky.neu.edu

**Who can I contact about my rights as a participant?**
If you have any questions about your rights in this research, you may contact Nan C. Regina, Director, Human Subject Research Protection, 490 Renaissance Park, Northeastern University, Boston, MA 02115. Tel: 617.373.4588, Email: n.regina@neu.edu. You may call anonymously if you wish.

**Will I be paid for my participation?**
There will be no compensation for participation.

**Will it cost me anything to participate?**
No

**Is there anything else I need to know?**
The researcher does not supervise any participants, nor will participation in this study affect the performance evaluation of the participants.
I agree to take part in this research.

<table>
<thead>
<tr>
<th>Signature of person agreeing to take part</th>
<th>Date</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Printed name of person above</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Signature of person who explained the study to the participant above and obtained consent</th>
<th>Date</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Printed name of person above</th>
</tr>
</thead>
</table>

Template 1 NU HSRP Rev. 4/21/2015
Appendix F: Teachers’ Sense of Efficacy Scale (long form) (Tschannen-Moran, Woolfolk-Hoy, 2001)

**Teacher Beliefs- TSES**

This questionnaire is designed to help us gain a better understanding of the kinds of things that create challenges for teachers. Your answers are confidential.

**Directions:** Please indicate your opinion about each of the questions below by marking any one of the nine responses in the columns on the right side, ranging from (1) “None at all” to (9) “A Great Deal” as each represents a degree on the continuum.

**Please respond to each of the questions by considering the combination of your current ability, resources, and opportunity to do each of the following in your present position.**

<table>
<thead>
<tr>
<th>Question</th>
<th>Nothing</th>
<th>Very Little</th>
<th>Some Influence</th>
<th>Quite A bit</th>
<th>A Great Deal</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How much can you do to get through to the most difficult students?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. How much can you do to help your students think critically?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. How much can you do to control disruptive behavior in the classroom?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. How much can you do to motivate students who show low interest in school work?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. To what extent can you make your expectations clear about student behavior?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. How much can you do to get students to believe they can do well in school work?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. How well can you respond to difficult questions from your students?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. How well can you establish routines to keep activities running smoothly?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. How much can you do to help your students value learning?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. How much can you gauge student comprehension of what you have taught?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11. To what extent can you craft good questions for your students?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12. How much can you do to foster student creativity?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13. How much can you do to get children to follow classroom rules?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14. How much can you do to improve the understanding of a student who is failing?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>15. How much can you do to calm a student who is disruptive or noisy?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>16. How well can you establish a classroom management system with each group of students?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>17. How much can you do to adjust your lessons to the proper level for individual students?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>18. How much can you use a variety of assessment strategies?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>19. How well can you keep a few problem students from ruining an entire lesson?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>20.</td>
<td>To what extent can you provide an alternative explanation or example when students are confused?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>21.</td>
<td>How well can you respond to defiant students?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>22.</td>
<td>How much can you assist families in helping their children do well in school?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>23.</td>
<td>How well can you implement alternative strategies in your classroom?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>24.</td>
<td>How well can you provide appropriate challenges for very capable students?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
Appendix G: Permission Letters to use the *Teachers’ Sense of Efficacy Scale*

Dear Jennifer Chirles,

You have my permission to use the *Teachers’ Sense of Efficacy Scale* in your research. A copy the scoring instructions can be found at:


Best wishes in your work,

Anita Woolfolk Hoy, Ph.D.
Professor Emeritus
March 20, 2018

Jennifer,

You have my permission to use the Teacher Sense of Efficacy Scale (formerly called the Ohio State Teacher Sense of Efficacy Scale), which I developed with Anita Woolfolk Hoy, in your research. You can find a copy of the measure and scoring directions on my web site at http://wmpeople.wm.edu/site/page/mxtach. Please use the following as the proper citation:


I will also attach directions you can follow to access my password protected web site, where you can find the supporting references for this measure as well as other articles I have written on this and related topics.

I would love to receive a brief summary of your results.

All the best,

Megan Tschanne-Moran
The College of William and Mary
School of Education
Appendix H: Focus Group Interview Protocol

Date: ___________________________ Time: ___________________________

Participant Names:

Introduction: Thank you for participating in this focus group. The goal of this interview is to collect information regarding your experiences with the implementation of the Race to the Top Policy initiatives, specifically the new state standards, standards-based assessments, and evaluation plan. I’d like to better understand your perceptions of the policies on your instruction and well-being.

Before we start with the formal questions, let’s go around and introduce each other. Share your name, what grade and content area you teach and how long you’ve been teaching.

<table>
<thead>
<tr>
<th>Focus Group Interview Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Describe your involvement in the new standards, Smarter Balanced assessment, and evaluation plan (ex. have you served on any committees, written curriculum, provided training, etc.).</td>
</tr>
<tr>
<td>2 Describe any professional developed you have received with regard to the new standards, standards-based test, and evaluation plan.</td>
</tr>
<tr>
<td>3 Describe your experience with the implementation of the new evaluation plan.</td>
</tr>
<tr>
<td>4 Describe any supports have you received with regard to the new standards, standards-based test, and evaluation plan.</td>
</tr>
<tr>
<td>5 What has been your experience with the school and community reaction to the Smarter Balance and CT Core Standards implementation?</td>
</tr>
<tr>
<td>6 Describe any changes to the materials (curriculum, textbooks, technology, etc.) that you are using since the implementation of the new standards, and assessments?</td>
</tr>
<tr>
<td>7 Describe your instructional practice in preparing students for the Smarter Balanced assessment, compared to the prior assessment, the Connecticut Mastery Test.</td>
</tr>
<tr>
<td>8 In looking at student assessment data, there was an increase in the Class of 2020 Cohort achievement results. What do you notice about the data results? How did the growth happen?</td>
</tr>
<tr>
<td>9 Of the professional development you have received, which, if any has had the most meaningful impact on your instruction.</td>
</tr>
<tr>
<td>10 How would you describe the culture and climate of your school during the implementation of the new standards, assessment, and evaluation plan?</td>
</tr>
<tr>
<td>11 In your How is preparing for the Smarter Balanced Assessment the same or different than preparing students for the CAPT Assessments?</td>
</tr>
<tr>
<td>12 How has the your ability and effectiveness to instruct been influenced by the new standards and assessments?</td>
</tr>
<tr>
<td>13 How has your ability to engage, motivate, and support students been influenced by new standards and assessments?</td>
</tr>
</tbody>
</table>
### Appendix I: Index of Themes, Codes, and Abbreviations

<table>
<thead>
<tr>
<th>Research Question</th>
<th>Components of Framework</th>
<th>Themes (code)</th>
<th>Sub-Themes (code)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1)</strong> How do teachers perceive their instructional practices been impacted since the implementation of RTTT curriculum and assessment initiatives?</td>
<td>Include staff in the change process</td>
<td>INCLUSION (EC-INC)</td>
<td>Professional Development (EC-INC-PD)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Team (INC-TEAM)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Collaboration (EC-INC-COL)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Participant (EC-INC-PART)</td>
</tr>
<tr>
<td></td>
<td>Develop internal capacity</td>
<td>CAPACITY (EC-CAP)</td>
<td>Standards (EC-CAP-STD)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Workshop (EC-CAP-W)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Training (EC-CAP-TR)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Professional Learning Community (EC-CAP-PLC)</td>
</tr>
<tr>
<td>Build internal accountability linked to external accountability</td>
<td>ACCOUNTABILITY (EC-ACC)</td>
<td>Testing (EC-ACC-TEST)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Evaluation (EC-ACC-EVAL)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Used Student Data (EC-ACC-DATA)</td>
</tr>
<tr>
<td>Create positive pressure by removing excuses</td>
<td>PRESSURE (EC-P)</td>
<td>Resources (EC-P-R)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Time (EC-P-T)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Support (EC-P-S)</td>
</tr>
<tr>
<td>Build public confidence</td>
<td>CONFIDENCE (EC-CON)</td>
<td>Community (EC-CON-COM)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Parents (EC-CON-PAR)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Feedback (EC-CON-FB)</td>
</tr>
<tr>
<td></td>
<td>Changes were made in materials, practice, and beliefs.</td>
<td>CHANGE (EC-CHG)</td>
<td>Materials (EC-CHG-M)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Instructional Practice (EC-CHG-I)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Beliefs (EC-CHG-B)</td>
</tr>
<tr>
<td><strong>2)</strong> How do teachers perceive their instructional</td>
<td>Teachers were provided with mastery and vicarious experiences</td>
<td>EXPERIENCES (SE-EXP)</td>
<td>Professional Development (SE-EXP-PD)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Workshop (SE-EXP-W)</td>
</tr>
<tr>
<td>self-efficacy since the implementation of RTTT initiatives?</td>
<td>School leaders use social persuasion</td>
<td>Training (SE-EXP-TR) Professional Learning Community (SE-EXP-PLC)</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td></td>
<td>COMMUNICATION (SE-COM) Feedback (SE-COM-FB) Vision (SE-COM-VIS)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachers did not have an increase in emotional arousal</td>
<td>EMOTION (SE-EMO) Negative (NEG) Positive (POS)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachers with strong self-efficacy provide students with opportunities to master content</td>
<td>SELECTION (SE-SEL) Activities (SE-SEL-ACT) Assessment (SE-SEL-ASM) Test Prep (SE-SEL-PREP)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachers with high self-efficacy ability to handle complex tasks and are confident in their ability to instruct</td>
<td>ABILITY (SE-ABL) Control (SE-ABL-CTL) Standards (SE-ABL-STD) Instructional Practice (SE-ABL-I)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teachers with high self-efficacy have the ability to engage, motivate, and support students.</td>
<td>MOTIVATION (SE-MOT) External (SE-MOT-EXT) Internal (SE-MOT-INT) Support (SE-MOT-SUP)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>